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Institute of Tropics and Subtropics



Diploma Thesis

**Analysis of effectiveness of state scholarships as a tool for
development cooperation**

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Declaration

I declare that I have worked on my Diploma thesis titled “Analysis of effectiveness of state scholarships as a tool for development cooperation” by myself and I have used only the sources mentioned at the end of the thesis.

In Prague on

Petra Vašků

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**Analysis of effectiveness of state scholarships as a tool for
development cooperation**

**Analýza efektivnosti poskytování státních stipendií jako
nástroje rozvojové spolupráce**

Abstract

The thesis analyzes effectiveness of the Czech state scholarship programme which is implemented into development cooperation of the Czech Republic for more than 60 years and which contributes to higher education which is an important factor of further development. It follows previous recommendation to focus separately on each country receiving the scholarships; in this case on Mongolia and Angola. The study in form of questionnaires evaluates effectiveness of the system based on three main aspects - personal contributions to scholars measured in form of improved employment opportunities of graduates; their return into countries of origin in order to share gained knowledge and experience with the whole society; and desire to be included in activities related to the Czech Republic and therefore to be contributive for the Czech Republic. The results provide evidence that the former scholars reach good job positions with satisfactory income and they utilize in their jobs the knowledge gained in the Czech Republic. Although they would like to be included in activities related to the Czech Republic, mainly in form of commercial and development cooperation, the Czech Republic does not utilize this potential and therefore do not gain from relations established during the provision of scholarships as it could. The study supports previous recommendations to increase the scholarships because financial problems are mentioned very often; to provide study programmes in English although the scholars can utilize Czech language during further cooperation with the Czech Republic; and to appoint responsible institution which would keep contact with the graduates in order to enable to benefit from the scholarships reversibly and to monitor further actions of scholars.

Keywords: effectiveness, state scholarships, development cooperation, tertiary education, Angola, Mongolia

Abstrakt

Diplomová práce analyzuje efektivitu českého systému poskytování stipendií, který je součástí rozvojové spolupráce České republiky už více než 60 let a který přispívá k vyšší vzdělanosti jakožto důležitého faktoru dalšího rozvoje. Navazuje na předchozí doporučení zaměřit se zvláště na každou zemi, která stipendia získává; v tomto případě na Mongolsko a Angolu. Studie formou dotazníků hodnotí efektivitu systému na základě tří hlavních aspektů – osobní přínos pro stipendisty měřený formou lepších pracovních příležitostí absolventů; jejich návratnost do země původu, kde mohou dále sdílet získané vědomosti a zkušenosti se zbytkem společnosti; a chuť nadále se účastnit aktivit spojených s ČR a tím být přínosným pro ČR. Výsledky dokazují, že dřívější stipendisté dosahují dobrých pracovních pozic s uspokojivým příjmem a že v práci využívají znalosti získané v ČR. Ačkoli by se rádi zapojili do aktivit spojených s ČR, především ve formě obchodní a rozvojové spolupráce, ČR nevyužívá tohoto potenciálu a proto ani nezískává ze vztahů, které si se stipendisty vytvořila během poskytování stipendií, kolik by mohla. Studie potvrzuje již předchozí doporučení na zvýšení stipendií, protože stipendisté často zmiňují finanční problémy; nabízet studijní programy v angličtině, ačkoli stipendisté mohou využít znalost českého jazyka v následné spolupráci s ČR; a určení odpovědné instituce, která by udržovala kontakty s absolventy tak, aby ČR mohla zpětně ze stipendií těžit a aby mohla monitorovat jejich další počínání.

Klíčová slova: efektivita, vládní stipendia, rozvojová spolupráce, terciární vzdělávání, Angola, Mongolsko

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1. Introduction

The whole world is one complementary, complex and inter-related unit. Therefore the developed countries should focus on help to the poor countries in their own interest because failure of one component can cause failure of the whole and on the other hand, both sides can gain from good relations with others. But first of all, the developed countries should not omit the fact that it is simply right and ethical to help the disadvantaged and to share what they have in order to help the one who have lack of some resources.

The Czech Republic belongs to the group of developed countries and it does not forget to take responsibility and to implement development cooperation into its foreign policy. It joined the international attempts which aim to fight poverty and to improve standard of living of people from the developing part of the world.

Because knowledge and education is one of the effective tools how to fight the problems and how to find possible solution the Czech Republic gave developing countries its hand and shares its professional skills in this field as well as it enables the proper students from these countries to study at Czech public universities with support of the Czech state scholarship programme since 1950. Since that time there were over 22 thousands of students who could take advantage from this system and for whom it was huge contribution. On the other hand, in case of good employment of the scholar the Czech Republic can also gain from this relationship reversely – e.g. in form of export relation with the home country of the scholar or of general world security.

The Czech scholarship system has been criticised for low effectiveness that the government tries to increase. There was accepted new conception for years 2010-2017; based on recommendations of previous analyses. It defined 5 priority countries of the Czech development cooperation and several other which are of high interest. Despite these recent changes it is still worked on other adjustments of the current conception which should be prepared in September 2012 and applied since 2013.

Because it is not easy to analyse the effectiveness in general, if it is possible at all, we can try to demonstrate the positive and negative effects of the scholarship programme on small unrepresentative sample of scholars from chosen countries which was recommended by the recent study of Horký *et al.* (2011). This analysis belongs together with highly valued and

still important analysis of Jelínek *et al.* (2004) to two main studies focused on this topic which were assigned by the Institute of International Relations Prague established by Ministry of Foreign Affairs of the Czech Republic.

The own thesis follows logical hierarchy of information about the topic. After brief introduction, statement of objectives and description of methodology used, the fourth chapter covers importance of the development cooperation and main aims which the Czech Republic has chosen in this field; role of scholarships and contributions which the provision of scholarships can offer to the receivers and also to the provider.

The next chapter focuses on brief history of provision of the scholarships to students from developing countries from its beginning in 1950's and on different approach which the country had in the communist and then in democratic era after 1989.

The sixth chapter is dedicated to the current situation of the scholarship provision – it includes information about fields of study which are offered, about number of students who can gain the scholarship each year, position of priority countries in the system, budget and costs per students and also amount of scholarship. It informs also about one of the crucial aspects of the effectiveness of the scholarship programme – about return of scholars to their countries of origin.

The following chapter summarizes the main critics which the system of scholarships in the Czech Republic faces. It mentions offer of all levels of tertiary education, number of beneficiary countries, process of selection of applicants, unrestricted possibility to choose field of study, insufficient amount of programmes taught in English, lack of information about the scholars and no further contact with scholars after their graduation which eliminates possibility to evaluate effectiveness of the programme and also possibility to utilize good relations established between the scholars and the Czech Republic, insufficient arrangements to make the scholars to return to their countries of origin and it also discusses general problem related to the scholarships – brain drain.

In the eighth chapter, the thesis provides information about scholarship provision in two other European countries – in Austria and in Belgium. It describes their conditions related to scholarships and situation in some aspects for which the Czech system is criticised.

Then it gets to the own analysis of the situation of scholars from countries chosen for this thesis – in this case, the study focuses on scholars who graduated under the

Czech/Czechoslovak scholarship programme in the past and were from Angola and Mongolia. Both these countries belong to the group of countries on which the Czech Republic focuses in its development attempts and also both of them are one of the world poorest countries and therefore development cooperation is important for further improvement of their situation. First of all, the countries are introduced in general - according to their general characteristics, development and tertiary education indicators; also historical relations with the Czech Republic in this area are mentioned.

The most important part, the own analysis, provides information resulting from questionnaires distributed in these two countries although for Angola were collected only little data. It discusses employment opportunities of the former scholars which is used in terms of evaluation of the contributions of the whole scholarship programme for students from these two countries; it also follows the rate of return of students back to their countries of origin and their further relation to the Czech Republic and also possible utilization of these relations for fulfilling development efforts of the Czech Republic in these countries. You can find there analysis of deeper relationship between gender and level of income which the Mongolian respondents reach in their country.

Although the sample used for the study is not representative and the findings can not be generalized and applied nor on the whole programme neither on the two countries in general it can provide common point of view on this topic and support the main recommendations how to improve quality and effectiveness of the Czech state scholarship programme in the future.

It would be necessary to collect huge amount of diverse data to evaluate the development effect on the developing countries themselves if it would be possible at all; the scholarships contribute mainly to the development of the scholars and the provision of scholarship is beneficial mainly for them and their close family members. On the other hand, the development of one member of the society is contribution to development of the whole although it is not easily measurable. So it can be stated that there must be some general contribution although there are provided no direct proofs.

2. Objectives

Aim of the Diploma thesis is an analysis of effectiveness of policy related to the state scholarship provision for students from developing countries in the Czech Republic; of former scholarship holders from Mongolia and from Angola. It wants to identify wider benefits and contributions which the scholarship had for these students and for their country of origin in form of improved employment opportunities such as higher income or better job positions as well as for the Czech Republic in form of further cooperation of scholars with the Czech Republic.

The thesis aim is to validate the hypothesis, which is: The Czech state scholarship provision improves employment opportunities of its receivers after finishing their studies and therefore contributes significantly to the international development and reduction of global inequalities.

The objectives will be reached via results of questionnaires while the own result section works mainly with categorical or qualitative variables; respectively with the nominal one (such as field of study or current employment), dichotomous (e.g. gender) and also with the ordinal (e.g. level of income or persuasion that they reach higher income due to degree and expertise gained in the Czech Republic/Czechoslovakia). These variables had to be coded in order to be analyzed statistically. The results also included discrete quantitative results (integer numbers), e.g. contribution of study for the respondents in range from 1 to 5. The simple linear regression model includes ordinal variable as the dependent one (level of income in country of stay of respondents) and dichotomous nominal variable as the explanatory (gender).

3. Methodology

The own research was focused on graduates who took advantage from state scholarship provision in the Czech Republic or in former Czechoslovakia and were from Angola or Mongolia which were two countries in which the research was interested. Current students and scholars who did not finish their studies successfully were excluded from the target group.

The study was based on explanatory applied research with structured quantitative approach. The method used for gathering primary data about studied topic was empirical method of questionnaires. The questionnaire was distributed among graduates of the Czech state scholarship programme via email and also personally by local CULS-ITS development projects employees in case of Mongolia.

One of the main problems related to scholars from developing countries is lack of data and information about them after their graduation. There is not any institution responsible for keeping contacts with them although it would be necessary for high-quality analysis of the effectiveness of the system. This problem occurred crucial also during this study. Because of lack of contacts on former scholars as sampling technique was used so called snowball sampling which belongs among non-probability method and which utilizes existing contacts in order to extend the sample via mutual relations of the respondents. Possibility of biases has to be taken into account – such as relations of scholars who returned back to the country of origin and are still in touch (e.g. during meetings of graduates).

The questionnaire included 35 questions (it is attached in annexes of the thesis), majority of them were closed questions but there was also space for additional comments or for explanation of given answers in order to specify or explain the answers more deeply. The questions were divided into several parts – questions about personal characteristics of respondents (gender, country of origin etc.), specification of their study in the Czech Republic (study programme, years of study), satisfaction with the study, employment opportunities after graduation, specification of places of stay after graduation, further contacts with the Czech Republic and willingness to be included in activities connected to the Czech Republic.

Finally, the questionnaire was answered by 45 respondents; respectively by 3 respondents from Angola and 42 respondents from Mongolia.

It was not possible to find contacts for sufficient amount of former Angolan scholars in order to reach any sample which could be considered as representative; despite the long-term cooperation with Angola. One of the unfavourable factors was also the fact that the Czech University of Life Sciences finished the last project in Angola last year so there was nobody who could take part in this study directly in Angola. No possibility to distribute the questionnaire directly also in Angola was one of the limiting factors which caused lack of questionnaires fulfilled by graduates from this country. We have used only contact via email which is not much infallible.

Basic background of the topic and general information was derived from secondary sources:

- I. From government documents, mainly documents of Ministry of Foreign Affairs of the Czech Republic (MZV) and Ministry of Education, Youth and Sports. Many of these documents are internal and therefore not available for public and were provided only for purposes of analysis of Horký *et al.* (2011). The most important public documents are:
 - *Zpráva o zahraniční politice České republiky, MZV, 2011*: It includes general information about the whole foreign politics of the Czech Republic of which scholarships are part. It provides data about number of scholars and further specification such as language or field of study; also costs or specific information for each partner country.
 - *Česká republika pomáhá, Zahraniční rozvojová spolupráce České republiky v roce 2010, MZV, 2011*: It includes information about all priority and programme countries and overall data about the development cooperation in each field, including scholarships.
 - *Koncepce zahraniční rozvojové spolupráce České republiky na období 2010-2017*
- II. Statistical databases collecting data on education and development used for description of current situation (in 2012) in the two countries included in the study – Mongolia and Angola.

- Mainly database of the United Nations Educational, Scientific and Cultural Organization including indicators on tertiary education such as tertiary school enrolment and graduates or international flows of students.
- United Nations Database – UN Data, providing additional data on tertiary education in Angola and Mongolia.
- Or United Nations Development Programme – UNDP Human Development Report and its data about Human Development Index.

III. The most important source of information are previous studies and surveys focused on this topic – analysis of state scholarships provision written by *Jelínek et al. (2004)* and recent analysis of state scholarships of *Horký et al. (2011)* which the author took part in.

For analysis of the collected data were used simple statistical methods, respectively descriptive statistics for initial description and summarization of data. All the answers were coded and simple analysis of collected data was done in MS Excel. But the study is also interested in several deeper relations between the variables.

First of all, influence of gender as the explanatory variable x_1 on level of income in country of stay of respondents as the dependent variable y has been tested. The simple linear regression model formed from these conditions uses OLS method (ordinary least squares method) for estimation of the parameters for which Gretl software was utilized. The answers were coded in following way in order to fit into the model and to be analyzed:

- *dependent variable y* - Question 14: Your income in the country in which you live is

Below average	1
Average	2
Above average	3

- *independent variable x_1* – Question 32: Gender

Man	1
Woman	2

In case that the respondent was not employed the question 14 was not fulfilled and then marked as 0. The data set used for the analysis is attached in annexes.

Moreover, a few other relations have been tested statistically. The study was also interested in influence of type of degree gained in the Czech Republic and gender on higher income reached due to this degree or on level of income in respondent's country of stay. Unfortunately, the results provided by Gretl have been neither statistically significant nor verifiable. Therefore these are not included in the result part of the thesis and have not been discussed. However, the results are attached in annexes and can be examined there.

4. Development cooperation and the Czech state scholarship programme

The Czech Republic is one of the countries which decided to take responsibility and to gain international efforts to help developing countries to increase their standard of living and to fight against problems they face. The Czech development cooperation is an important component of the overall Czech foreign policy. According to Ministry of Education, Youth and Sports of the Czech Republic (2012b), the Czech international development cooperation has several aims, such as:

- poverty alleviation
- social, economic and agricultural development
- integration of developing economies into international markets
- development of democracy, human rights or legal framework
- or sustainable development of developing countries.

The government scholarship programme which is part of bilateral cooperation is one of the tools via which these efforts are accomplished as it enables the students to extend information which they have about these topics and to perceive mutual relationships of individual components. Education and human potential plays crucial role in all areas of development (Institut de Recherche pour le Développement, 2003). Moreover, education can be perceived as a tool of conflict prevention; e.g. in case of genocides and prevention of them in the future through education which increases awareness, changes thinking and educates for humanity (UNESCO, 2012).

But the scholarships are not always only tool of the overall development cooperation but they can emerge as reaction on present global movement. Such as in case of the recession in late 1990's which highly affected Asian world there was huge decline in number of students who came to the United Kingdom (e.g. from Malaysia the amount drop from 18,000 students in 1997 to 2,140 in 1999) and therefore there was established special scholarship fund to motivate students from Asia to enrol into higher education in Great Britain (Chronicle of Higher Education, 1999).

As was stated in the study of Jelínek *et al.* (2004), the main contributions of the state scholarship programme are these:

- development
- export
- political and security
- and cultural contribution.

Based on Jelínek *et al.* (2004), the development aspect is the most important and the main aim of the programme itself. But there are more criteria related to study which have to be fulfilled to reach the aim. The field of study should correspond with the main problems or challenges which the student's country of origin faces – such as agriculture, water management, international trade, etc. There should be an assumption that when the student applies the knowledge gained during his/her study it will bring improvement of the overall situation of the country. Information and knowledge about practices, processes and relations among them and its practical use is the main aspect which contributes to all aspects of human, economic as well as social development. It makes people understand and it broadens their horizons that consequently enable sustainable change. This first precondition has to be followed by successful graduation of the student and first of all, by return to his/her country of origin and further activity in the field of study he/she has finished because otherwise benefit brought to the country of origin are highly disputable and the main objective of the scholarship programme is not fulfilled.

The next mentioned contributions of the scholarship programme can be considered as secondary but can have still high importance for the developing country as well as for the Czech Republic. They are generally influenced by the student – by his/her position and decision power in the country which he/she gains and also by willingness to participate in the change and further broadening of what he/she has learned in the Czech Republic. Knowledge of the environment in the Czech Republic, positive relationship to the country and suitable job position of the student in his/her country of origin can give rise to trade relations of these two countries which subsequently contributes to the development of the country. The political relationships can improve as well as relations in the country itself, as the former student has gained knowledge about functioning of the legal democratic state which adheres to human rights. Moreover, foreign students get closer to the Czech culture

and can then propagate the Czech Republic in the world which can induce others to visit the country or to establish relationships with the Czech Republic.

On the other hand, all the contributions are proved with difficulties and they are rather personal than general. Evaluation of the contributions is also aggravated because of poor data collection about scholars and their after-graduation activities. The only provable fact is personal development of the scholar as he/she is provided with better knowledge, wider view of the world and perception of different developed culture with democratic values.

5. History of the Czech state scholarship programme

According to comprehensive summary of People in need and its agency Rozvojovka (2008) which is the main source of information for this chapter, the Czech development cooperation has its long history. As former Czechoslovakia, it provided help to the Third world since 1950's. But its approach was different under the Communist regime and then after 1989, in the democratic era when the system deflected from building of socialistic relationships and values.

Before 1989, the efforts were oriented to countries with the same socialistic regime or to countries with features of planned economy¹. Non-European socialistic countries such as Cuba, Mongolia, Northern Korea, Vietnam, Laos and Cambodia belonged among main partners. Other priority countries were: Ghana, Guinea, Mali, Afghanistan, Angola, Ethiopia, Yemen, Mozambique and Nicaragua. Other countries were not in interest of the former Czechoslovakia because their values and persuasion did not correspond with the socialistic ones.

The scholarship programme was under control of so called University of the 17th November which was special institution established directly to coordinate the system of scholarship provision for students from partner countries. Up to 1990's, the scholarship got more than 20,000 students while in 1980's it was around 850 students each year (Rozvojovka, 2008).

After 1989, the Czech development cooperation was transformed according to internationally recognized principles and priorities. Applicants had to pass the entrance exams as the universities became sovereign subjects with own decision powers. The 1990's era was criticised for its low efficiency and non-uniform procedure. There was also huge fall in amount of scholarships provided – from 850 in 1980's up to 150 in early 90's, for period 2003 – 2007 it was 250 places (Jelínek *et al.*, 2004). After 2000, the Millennium Development Goals have been included in the Czech development cooperation and the whole system was made more systematic and its focus was narrowed. Another changes occurred after Czech access to the European Union when the Czech approach was harmonized with the European one.

¹ e.g. Syria, Algeria, Libya, Iraq, India, Congo, Benin, Mexico, Venezuela, Nigeria or Iran

Currently, there are also several scholarships provided via UNESCO programme.

Table 1: Number of Czech scholarships provided each year since 1992

1992/93	300	2002/03	200
1993/94	300	2003/04	250
1994/95	150	2004/05	250
1995/96	150	2005/06	250
1996/97	150	2006/07	250
1997/98	200	2007/08	250
1998/99	200	2008/09	130
1999/2000	200	2009/10	130
2000/01	200	2010/11	130
2001/02	200	2011/12	130

Sources of data: Jelínek *et al.*, 2004; Usnesení vlády ČR (1994, 1996, 2001, 2007); created by author

New Conception of foreign development cooperation for period of 2010-2017 has been accepted and it has brought other system changes of the development cooperation and included scholarship provision. It has reduced main priority countries of the Czech Republic which are 5: Afghanistan, Bosnia and Herzegovina, Ethiopia, Moldavia and Mongolia. But there are still countries on which the Czech Republic focuses despite not being under the main priority: Georgia, Cambodia, Kosovo, Palestine, Serbia; and former priority countries where focus of the cooperation is changed: Angola, Yemen, Vietnam and Zambia (MZV, 2011a).

6. Current situation in the state scholarship provision

Provision of scholarships is provided in cooperation of the Czech Ministry of Foreign Affairs and Ministry of Schools, Youth and Sport. Applicants can choose between all levels of tertiary study which Czech public universities offer – bachelor, master or doctor study. Bachelor and master study (5 year master programme) in Czech language and master (2 year programme) and doctor study in English (MŠMT, 2012a). Students who want to attend programmes taught in Czech and can not speak Czech they have to go through one year Czech language preparatory course which is organized by Institute of language and specialized preparation of the Charles University in Prague (Ústav jazykové a odborné přípravy Univerzity Karlovy) (MŠMT, 2011). The student can receive the state scholarship only for standard length of his/her study; the one year language preparatory course is also under the scholarship programme.

6.1. Available fields of study

According to Instructions for the award of scholarships of the government of the Czech Republic (MŠMT, 2011), applications for bachelor and master study are assessed in compliance with recommended fields of study for the scholars which is set according to identified needs and projects which are run in the specific country; these recommendations vary for each country. For the study in English, there are precisely identified programmes which the applicants can choose. Once the student is accepted, he/she can not change field of his/her study for which he gained the scholarship or the university.

In the school year 2012/13 there are offered following programmes taught in English in field of informatics, economics and agriculture (MŠMT, 2012a):

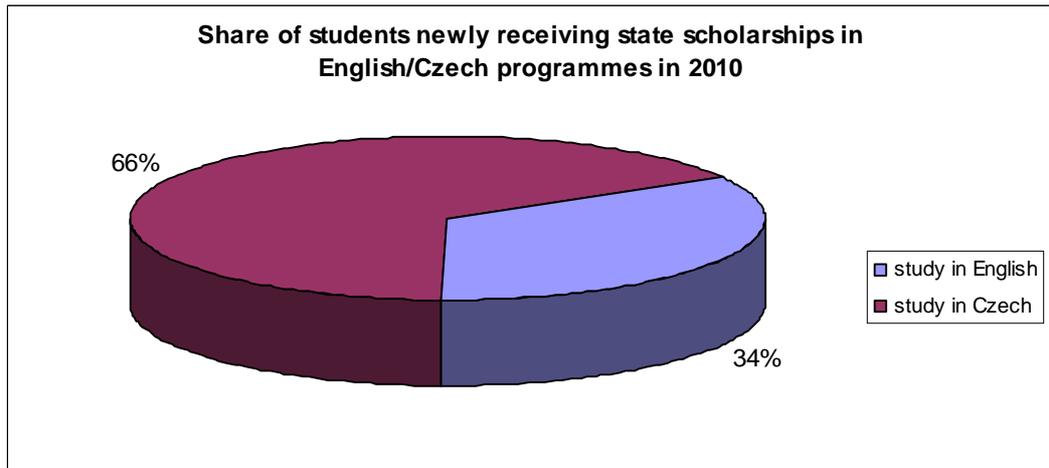
- magister programmes
 - Economics, Charles University Prague
 - Informatics, Czech University of Life Sciences Prague
 - Information Management, University Hradec Králové
 - Natural Resources and Environment, Czech University of Life Sciences Prague

- Forestry, Water and Landscape Management, Czech University of Life Sciences Prague
- Technology and Environmental Engineering, Czech University of Life Sciences Prague
- doctor
 - Economic Theories, Charles University Prague
 - Agriculture Chemistry, Mendeleev University Brno

Unfortunately this information provided by the Ministry and quoted also in the official documents given to the scholars is not complete. This can be well demonstrated on example of the Institute of Tropics and Subtropics of the Czech University of Life Sciences in Prague. Its study programmes are not mentioned in the list although there are many scholars from developing countries enrolled in them. Information about possibility to study at the Institute gets to scholars only in the Czech Republic and immediately before the entrance exams only due to effort of teachers and other members of the Institute.

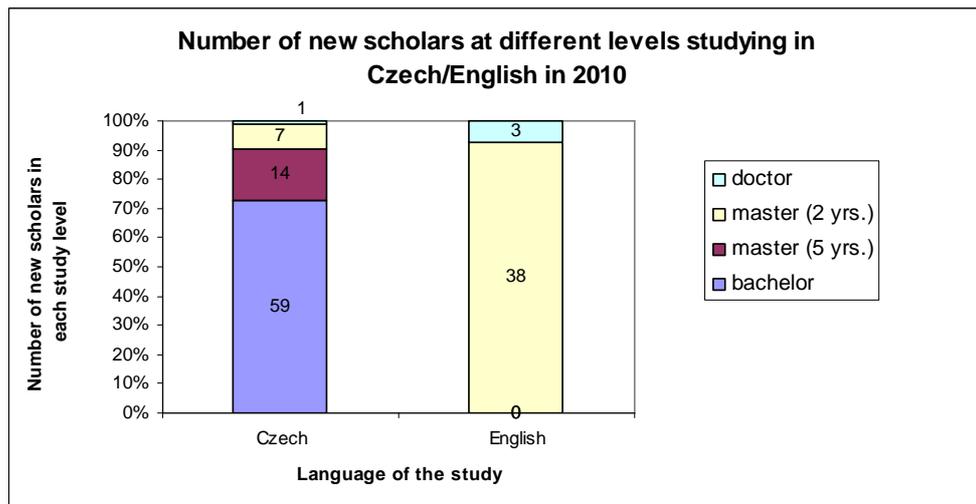
6.2. Number of students

According to the agreed conception, 130 new scholarships were offered to students from 46 developing countries in 2010 (60 of them for English programmes). All were distributed but finally only 122 students enrolled (41 of them enrolled the English programmes). Other 2 scholars gained via the UNESCO programme. There were 590 state scholars studying at the Czech universities from 74 countries of the world in 2010 (MZV, 2011c).



Graph 1: Share of students newly receiving state scholarships in English/Czech programmes in 2010

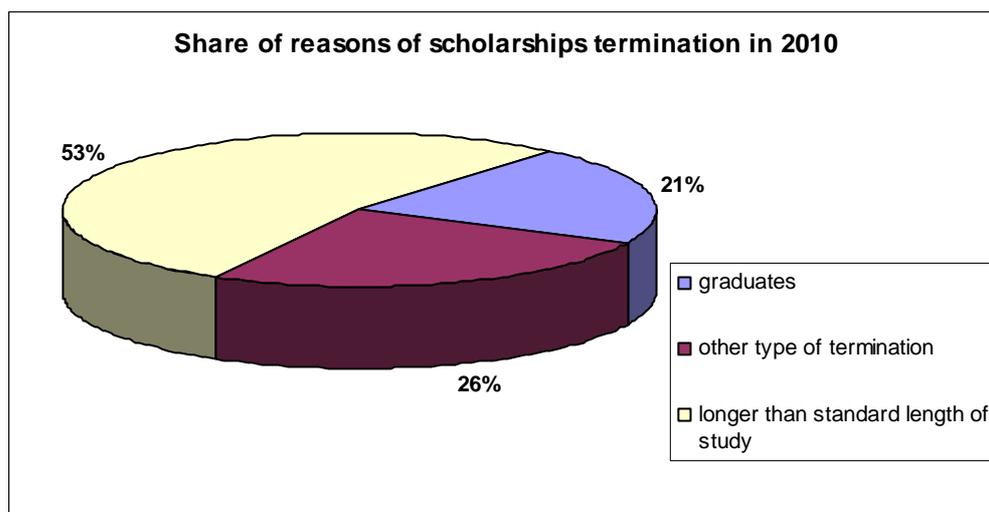
Source of data: MZV, 2011c; created by author



Graph 2: No. of new scholars at different levels studying in Czech/English in 2010

Source of data: MZV, 2011c; created by author

According to Ministry of Foreign Affairs and its available data for 2010, graduation as reason for termination of scholarship provision presents only 21% of the all 183 terminations (38 cases); the most frequent reason is that the scholars exceed standard length of study (97 cases; 53%). One fourth of students terminated their scholarships for other reasons (48 cases, 26%).



Graph 3: Share of reasons of scholarships termination in 2010

Source of data: MZV, 2011c; created by author

6.3. Scholarships for students from priority countries

Although there are defined priority countries of the Czech Republic these are not the main receivers of the Czech state scholarships. In the school year 2010/2011 there were 250 students from priority countries which is only 42% from all 590 scholars who gained from the system in this year (MZV, 2011c).

Table 2: Number of scholarships provided and of scholars from priority countries in 2010/2011

country	Scholarships provided in 2010/2011	Number of scholars in 2010/2011	Comments
Mongolia	3	31	
Bosnia	-	24	70 scholarships from other sources
Moldavia	13	36	
Ethiopia	9	24	3 in Czech, 6 in English; mainly agricultural programmes and medicine
Afghanistan	2	7	mainly technical programmes
Georgia	8	19	
Kosovo	-	2	
Serbia	-	32	
Cambodia	-	6	mainly medicine and philosophy
Palestine	3	12	mainly medicine

Vietnam	2	7	mainly chemistry and technology
Angola	2	19	mainly geology, agricultural and technical programmes
Yemen	1	18	mainly medicine
Zambia	2	13	mainly agricultural programmes

Source of data: MZV, 2011a; created by author

6.4. Budget and costs per student

In 2010, 20% from the whole budget of the Czech bilateral development cooperation was spent on state scholarships – it was 106 million Kč. It means that in case of number of scholars in 2010 which was 590, costs of one scholar per year were circa 180,000 Kč (MZV, 2011c).

However, this amount does not include all the costs which are related to the scholarships and scholars. There is no overall summary of all the costs included in the system (such as grants for universities or health insurance of scholars) because many institutions are involved in the system and no one collects information from the others. Therefore the sum does not offer complete view how much is actually spent on each scholar or on the system in general.

6.5. Amount of the scholarship

Students can get the scholarship only for the standard length of study, including one year language preparatory course in case of study in Czech. If the scholar exceeds this length he/she has to finance the further study on his/her own (which is very often situation according to data from 2010). Travel expenses are not part of the scholarship; it is in competence of the scholar or of the proposer of the scholar. The ministry warns also about initial costs after arrival to the Czech Republic, such as translation of documents or administrative costs related to study which can be from 3000 Kč up to 5000 Kč (MŠMT, 2011).

Amount of the own scholarship can be modified; now it is set as:

- for bachelor and master study: 9,000 Kč per month

- for doctor study: 9,500 Kč per month (MŠMT, 2011).

It is supposed to cover all necessary costs (accommodation, food, etc.). Costs of standard health care are financed by Ministry of Health.

In analysis of Horký *et al.* (2011) there is stated that this amount of scholarship is insufficient and they recommend increase by 20-25% in order to cover all of the costs which the scholars must settle because such amount is not adequate for life in big cities, first of all in Prague.

6.6. Return to the country of origin

Return of scholars to the country of origin is crucial point for fulfilment of the main development aim because if the student finishes his/her study and stay in the Czech Republic (or in any other country) it does not bring any contribution for his/her home country as was supposed. Unfortunately, the Czech Republic does not use any coercive tool to make students return as it is practice in other countries.

There are no exact numbers which would describe the situation objectively. We can only estimate the rate of return or base it on subjective perceptions. Jelínek in 2004 estimated that return rate is 50 – 95 %, the lowest for scholars from African countries. In case of Horký *et al.* analysis (2011), results of the questionnaires (despite being done on an unrepresentative sample) show that almost three fourths of the scholars stay in the Czech Republic after their graduation but majority of them only temporarily, mainly 1 – 5 years; after this period they return to their country of origin. Based on both resources, it can be estimated that rate of return varies somewhere between 50% and 70%; relating to the region from which students are and also language in which they study because if they study in English it is easier for graduates to find a job in a developed country either in Europe or in Northern America.

7. Main critics of the current system and recommendations for improvement

In the former studies of Jelínek *et al.* (2004) and Horký *et al.* (2011) which are both base for this chapter, after the own analysis of the Czech state scholarship provision system there were identified main problems and challenges which the Czech state scholarship system faces although both of them point at improvement in previous years. Critics cover the whole process from selection of candidates, over institutional problems up to termination of the study and further follow up.

7.1. Levels of education

Both studies agree that the current system of providing all levels of tertiary education is not effective. It should be eliminated only to 2-year master and doctor study, both taught mainly in English. Currently, these programmes present only 60 places out of all 130 scholarships offered, respectively 20 for 2-year master and 40 for doctor study (MZV, 2011c).

This concept would be more beneficial and also cost-effective because scholars do not spent time with learning Czech which brings them only small contribution and it shortens the length of the scholarship provision so the costs are lower. Higher level of tertiary education provides scholars deeper knowledge in field they are interested in and they already have base knowledge of the field. Then the study in the Czech Republic is only completion of their tertiary education so their motivation to finish it is higher. On the other hand, there are cases in which it is not possible to follow this recommendation, such as in case of medicine – then there should be provided the whole study programme.

However, knowledge of the Czech language can be base for stronger feedback of scholars to the Czech Republic and it can be intensively utilized during further cooperation between both sides – in business as well as in development efforts of the Czech Republic in developing countries when the former scholars can be very important parts of the coordination team. On the other hand, knowledge of the language can be one of the factors which simplify decision of scholars to stay in the Czech Republic because their integration into the Czech society and culture is then easier (FoRS, 2008).

7.2. Beneficiary countries

Number of beneficiary countries should be reduced as well, Jelínek states to ten, which belong to priority countries of the Czech Development Cooperation. The conception for years 2008 – 2011 included 33 countries which could take advantage of the Czech scholarships. Moreover, some of them can gain from other educational programmes provided for their countries and some of them are middle income countries so the development aspect is disputable.

It would be more effective to provide scholarships only to limited number of priority countries where it is provable that these countries are really of high necessity. But Horký *et al.* (2011) do not omit also other criteria which should be taken into account during selection of these countries – such as Czech offices in the country or quality of former cooperation with the country which gives base for further effective functioning and development of the relations with the country. On the other hand, there still has to be awareness about quality of scholars and they have to be examined according to given criteria, not only accepted in order to infill given quotas of provided scholarships.

7.3. Selection of applicants

Next problem is selection of applicants itself. It is done by representative offices in partner countries in compliance with basic directives set by the Czech government. Unfortunately, these directives are not strictly obeyed and sometimes unsuitable applicants are chosen; either because of poor adherence to the directives or because of simple effort of infill of quotas. These practices are then very often reasons for poor study results or for premature termination of the whole study because the applicants do not have needed prerequisites for studying the chosen field or for tertiary education in general or they are motivated by other things more than by desire for education (e.g. by possibility to get to Europe).

The applicant should be chosen carefully, based on personal interview and on proven motivation of the applicant to study given programme and to his/her vision of the future employment in the country of origin. In case of programmes taught in English, necessary is

also proven level of the language in order to prevent problems related to lack of knowledge of the language which would limit the scholar to finish his/her studies successfully.

7.4. Field of study

Another critic deals with field of study which the scholars can choose in the Czech Republic with support of the scholarships. Study programmes should be tightly related to the topics which are the most beneficial to the needed countries. Currently, applicants for bachelor or master study are limited in their selection via recommended fields of study. Unfortunately, these do not always correspond with needs of the beneficiary countries. In case of 2-year master programme and doctor study, there are offered economic, agricultural and informatics programmes – 6 master and 2 doctor programmes taught in English (MŠMT, 2011). This scope is very limited as there is much more accredited English programmes so the offer could be much wider in order to attract students more.

7.5. Lack of information

The whole system of the state scholarships is also criticised because of lack of information about the scholars. There is no institution which would observe the whole process from application up to finishing the studies and further activities of the scholar. There is nobody responsible for further contact with the graduates and the relationship with them is suspended; so the Czech Republic can not gain from the mutual relationships in the future, e.g. in form of trade relationships when the scholar reach suitable job position for such cooperation. Therefore, it is not easy to contact former scholars and neither monitor if the main aim of scholarship provision, development contribution, was fulfilled so the effectiveness of the whole system can be analyzed only with difficulties.

Also the own scholars have to face the lack of or incomplete information. As was mentioned above on the example of offer of possible study programmes for students from developing countries – the scholars do not get sufficient information and complete list of study programmes included in the scholarship system and therefore some of the programmes are disadvantaged and possibility of choice for students is limited.

Cooperation of all the institutions involved in the scholarships provision is also difficult because the whole system is shattered and it is hard to coordinate actions of all of them and to collect information in one place. For this reason, it would be necessary to establish one institution which would be considered as the main body of the whole system and coordinator of actions of others.

7.6. Return of scholars to the country of origin

As was stated above, return of scholars to the country of origin is crucial point for considering the whole scholarship provision as successful. The return to the country of origin is necessary to fulfil the development aim of the scholarship because otherwise it is not possible to share gained knowledge in order to improve the overall situation which the developing country faces and the scholar does not contribute to the improvement.

In view of the fact that nobody collects information about the graduates after termination of their study it is not possible to exactly analyze this aspect. There are available only estimates or opinions of students themselves or of representative offices, as was stated above. Although it is assumed that the scholars return to their country of origin after their graduation if this not happen there are no consequences for the scholars in case of the Czech state scholarship system. In some countries, the candidates have to sign that they will return to their country of origin and that they will work there for some period of time - then if they do not do they have to pay back the costs of the whole study (e.g. in case of Austria or Norway) (Horký *et al.*, 2011). This condition should be also included in the Czech scholarship system in order to make the scholars return to their countries of origin and to encourage them to be active in fields they studied in order to achieve development goals. Some donors also require future certificate of employment straight during the selection process of applicants.

However, this is not problem only of the Czech Republic. There is always significant amount of scholars who stay in the host countries permanently although this value differs for each country. This is case mainly of African students who choose France as their further place of stay the most often (Institut de Recherche pour le Développement, 2003).

7.7. Brain drain

Last but not least critic considers the system of scholarships for students from developing countries in general. Because once you enable people to study in any developed country it can very easily happen that the new lifestyle and possibilities absolutely different from his/her developing country of origin attract them so much that he/she lose motivation to return back. Then phenomenon called “brain drain” or “human capital flight” occurs. It is estimated that one third of highly educated experts left Africa and live abroad (Institut de Recherche pour le Développement, 2003). It was presented that in 2000 there were 20 million highly skilled immigrants who lived in the OECD countries which was over 60% increase in ten years – compared to only 15% increase in case of unskilled workers (Docquier – Marfouk, 2006).

One of the possibilities to prevent this situation is not to provide scholarships for study at universities in developed countries but to support students and education system directly in their developing countries; either financially or in form of professor visit who go for specified time to the university in the developing countries and there they increase their human capital in this area which is very often insufficient. It is also desired to assist universities in developing countries to improve their study programmes and support development of the whole tertiary education in these countries. Scholarship would be then only short-term additional instrument for the study gained in the home country.

The universities in developing countries themselves are aware of necessity of building competitive advantage in comparison with the universities from the developed part of the world. Therefore they create formations such as Southern Universities Network (Network of 50 universities from Africa, Asia and Latin America) based on cooperation of different academic institutions to be prepared for competition which they have to face in the international tertiary education market. If they improve their performance then they can decrease necessity to import tertiary educated people into their countries (Kigotho, 2002).

However, there also occur opinions that the negative aspect of brain drain is not so enormous. This is based on the fact that the scholars who stayed in the host country join together and then focus on help to their countries of origin in form of scientific, business or institutional cooperation via effective information exchange (Institut de Recherche pour le Développement, 2003). It also happens very often that the former scholars who stayed

abroad return back to their country of origin later and therefore bring additional skills gained abroad (McCulloch – Yellen, 1977). Moreover, it is believed that when brain drain occurs it motivates the drained countries to invest more in education and to increase human capital in these countries (Beine *et al.*, 2008).

8. Comparison of scholarship provision in other countries (Belgium, Austria)

Although provision of scholarship has long tradition in the Czech Republic/former Czechoslovakia we can not deny that there are still some limitations which the others but similar countries to the Czech Republic have already overcome. This part compares approach of other countries which are similar to the Czech Republic; respectively of systems run in Austria and Belgium which are both small European countries.

8.1. Scholarships in Austria

Overall view at the situation of provision of scholarships in Austria is provided by Feiler *et al.* in report “Evaluation of the Education Sector of Austrian Development Cooperation and Cooperation with South-East Europe” (2007). Austria has also long tradition in provision of scholarships, over 50 years and they consider scholarship as one of the main tools for educational cooperation. They run several scholarship programmes but the most important are One-World-Scholarship programme and North-South-Dialogue Scholarship programme which enrol three fourths of all Austrian scholars. Austria offers scholarships to developing countries but do not include South-East European countries, except Turkey. There is 500-600 beneficiaries each year who receive scholarship (which is very similar number as in the Czech Republic); majority of them is from Asia followed by Sub-Saharan Africa. Austrian aim is to reach half of women participation which is generally fulfilled. All the scholars are supposed to return back to their countries of origin which is well-founded in the study contracts and in case of non-fulfilment of this condition the scholar has to repay the whole amount of scholarship which he/she received.

The One-World-Scholarship programme focuses at students from developing countries of the South – from Africa, Asia and Latin America; who have already passed the first part of their tertiary education in Austria and therefore present lower costs and higher probability of finishing their studies. Scholars receive 500 EUR in case of master programmes; a bit more, 550 EUR, in case of doctoral programmes.

The North-South-Dialogue Scholarship programme is focused on post-tertiary education (doctoral studies or postgraduate research projects) and it highly promotes cooperation of

Austrian and developing country universities and research institutes in form of capacity building. The programme wants to reach two thirds of scholars from priority countries (Bhutan, Burkina Faso, Cape Verde, Ethiopia, Mozambique, Nicaragua, Palestine and Uganda). In this case the Austrian side also requires confirmation of future employment in the country of origin and does not enable to focus on art, theology or humanity studies. Austria claims that due to the strict conditions the return rate to the country of origin is around 90%.

Austria also provides short-term scholarship for education in tourism which is very often an important economic sector for developing countries. It consists of two parts – 8-month theoretical education and 3-month work practice, which gives the scholar not only knowledge base but also practical experience in given field and it enables them easier and fluent engagement in the sector after their return home.

8.2. Scholarships in Belgium

Also Belgium considers scholarships as an important tool for educational development cooperation and it invests significant part of budget for this type of cooperation into scholarships. Also in this country there is more possibilities how students from developing countries can get the scholarships, respectively there is 15 different routes of scholarship provision (Antonowicz *et al.*, 2007) – in majority to study in Belgium but also in home country or combination of both; short-term course scholarships are another possibility, e.g. fishery courses.

Belgium has identified 18 priority countries of the development cooperation² (ILO, 2012) but scholars in Belgium are from more than 25 countries (Belgian Technical cooperation, 2008). The main fields of study are medicine/pharmacy, economy and veterinary (Belgian Technical cooperation, 2008). During the selection of applicants, emphasis is put on equal share of men and women who gain the scholarship and also on 50% share of scholars from Sub-Saharan Africa. It is also required that the student returns to his/her home country but this is first of all part of the selection process of future scholars where also motivation and their professional experience in studied fields are considered (VLIR-UOS, 2012).

² Algeria, Benin, Bolivia, Burundi, Ecuador, South Africa, DRC, Mali, Morocco, Mozambique, Niger, Palestine, Peru, Rwanda, Senegal, Tanzania, Uganda a Vietnam

VLIR (Vlaamse Interuniversitaire Raad/Flemish Inter-university Council) provides 180 master scholarships (Scholarships for development, 2011a) and 70 courses (Scholarships for development, 2011b) each year, all taught in English and focused on utilization of knowledge in developing countries. There are 4 one-year master programmes (e.g. Master of Development and Globalization), eleven 2-year master programmes (e.g. Master of Aquaculture) (Scholarships for development, 2011a) and also 5 training programmes (e.g. Human Rights for Development) for which proven working experience in given field is necessary (Scholarships for development, 2011b).

150 master scholarships and 70 courses are also provided by Francophone University Commission for Development. Applicants have to prove at least 2-year working experience in their home country and sufficient knowledge of French (or of the language in which the programme is taught) (Scholarships for development, 2011c).

Belgian Technical cooperation distributes thousands of scholarships each year, either for study in Belgium or in home country in master or doctoral programmes or in professional courses. Again, candidates have to have professional experience or study given field in the past. 95% is placed into Belgian priority countries, 44% into Francophone Africa (Belgian Technical cooperation, 2008).

9. Chosen beneficiary countries – Mongolia and Angola

Both Mongolia and Angola belong to countries marked as developing. They fight strong economic problems and overall poverty. At the same time, they are priority countries of the Czech development cooperation – although Angola is not included in the main 5 priority countries defined by the conception for years 2010-2017 but it has still high priority as former programme country. The Czech government provides scholarships for students from these two countries in the long term and it has good inter-governmental relations with both of them.

9.1. Mongolia

9.1.1. General description of the country

Mongolia is large landlocked country located in Northern Asia. It is rich in natural resources (e.g. coal, oil, gold, etc.) but it is country traditionally based on agriculture. During the Soviet era its economy was transformed into industrial production but it faced huge economic recession after USSR break-up, high inflation and it was also seriously affected by the world crisis in last years. The situation improved after stabilisation of commodity prices and also thanks to its neighbour strong countries – mainly to China which presents huge export market for Mongolian products (CIA, 2012b).

9.1.2. Relations with the Czech Republic

The Czech Republic (as former Czechoslovakia) has diplomatic relations with Mongolia since 1950. Currently it is still one of the five priority countries of the Czech development cooperation defined in the conception for years 2010-2017. At the same time it is after Afghanistan the second biggest receiver of the Czech development cooperation – in 2010, Mongolia received 129 million from Czech development cooperation budget; and it is the country where the Czech Republic runs the most development projects (MZV, 2011a). The Czech Republic builds also strong cultural relations, e.g. via presence of Czech films at Mongolian film festivals (MZV, 2011c).

Despite very good relations with Mongolia there was a decrease in trade – in 2010 of 7.5% to 159 million Kč but still in positive balance in terms of the Czech Republic (MZV,

2011c). But the Czech development cooperation is still positively evaluated as with high potential for being beneficiary for economic interests of the Czech Republic (MZV, 2012).

The Czech Republic has concluded bilateral agreement with Mongolia about cooperation in field of education and research. It supports many educational projects, such as computer centres or textbooks printing for poor students. In the school year 2010/2011 the Czech Republic granted scholarships for 3 Mongolian students and in that year there were 31 state scholars in the Czech Republic (MZV, 2011a). It committed to regularly provide scholarships for students from Mongolia each year (MZV, 2011c).

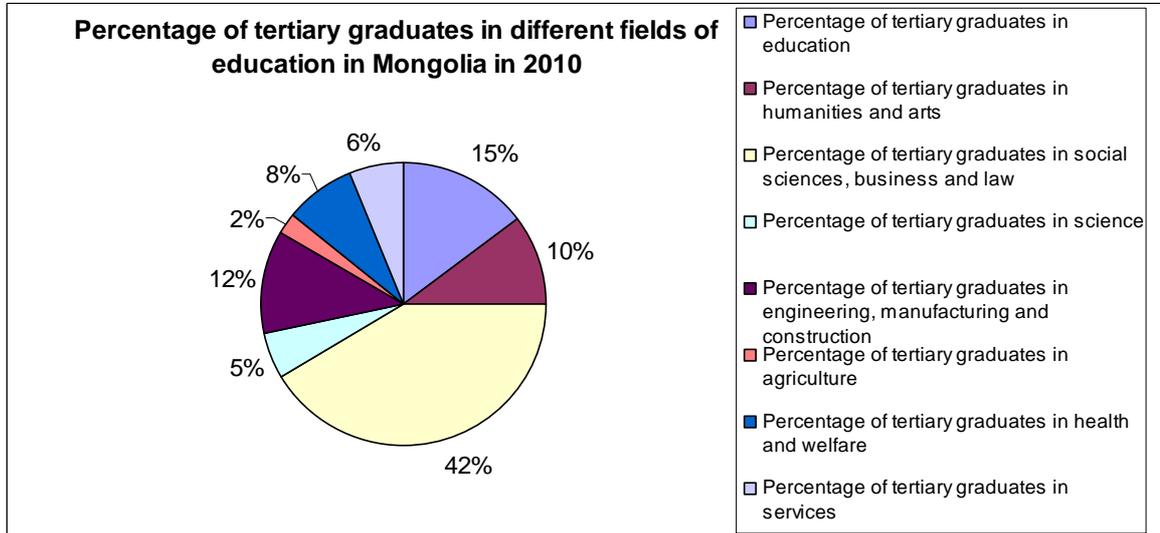
The medium-term outlook of the Czech development cooperation expects to progressively decrease resources spent on Mongolia – from 62 million Kč in 2012 to 57 million in 2013 up to 52 million in 2014 (MZV, 2011b).

9.1.3. Tertiary education

Although Mongolia belongs to developing countries it has developed educational system based on the Soviet era combined with utilizing know-how of the developed systems – e.g. it recognizes English as the main foreign language taught at schools. Mongols realize importance of education and importance of following the global trends in this field to make their education system and students competitive in an international market (Yembuu, 2010; Hall–Thomas, 1999). Despite the recent global recession they are still able to follow reform of its tertiary education system (Postiglione, 2010); according to law it spends 20% of GDP on education but still only small share on higher education (Government of Mongolia, 2006). On the other hand, loans on higher education are identified as very common reason of poverty among rural families which want to enable their children better education and therefore better life (Postiglione, 2011).

According to data for 2010 provided by UNESCO Institute for Statistics, tertiary school enrolment ratio is 52% which is relatively high (in case of the Czech Republic it is 61%). It is believed in Mongolia as in the traditionally agricultural country that men should do the hard work and take over family farms and women should study in order to be able to have their own income. Therefore there are more women than men enrolled into the tertiary education – 60% are women that is highly above Asian average and which presents so called reverse gender gap (Lin-Liu, 2005; Landecker, 2007). Majority of students focuses

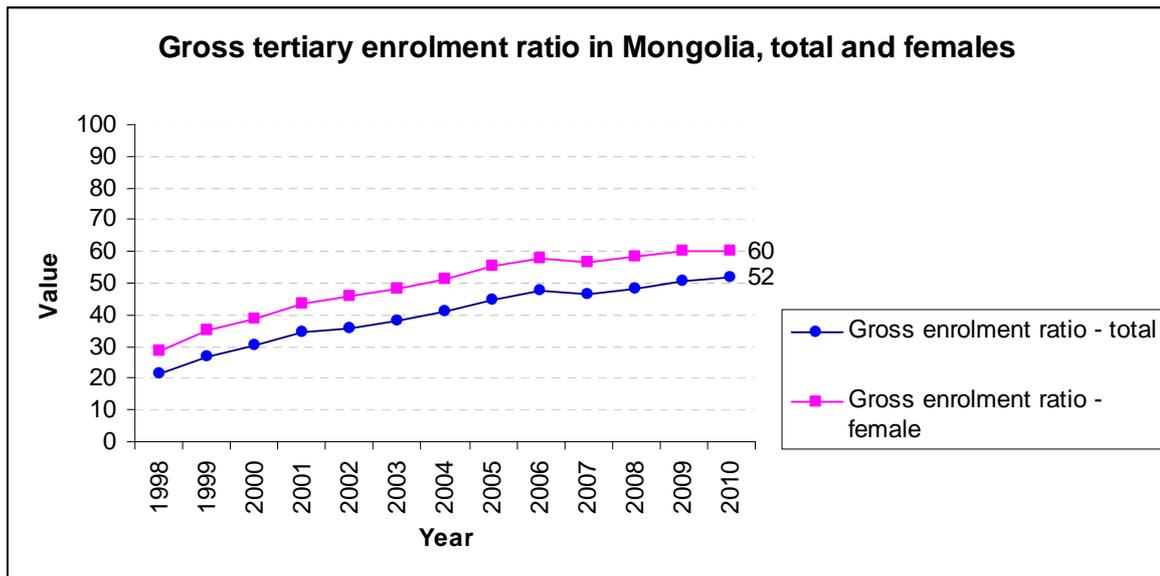
on social sciences, business and law (42% of them), other popular fields of study are education; engineering, manufacturing and construction; and humanities and arts (UNESCO Institute for Statistics, 2012).



Graph 4: % of tertiary graduates in different fields of education in Mongolia in 2010

Source of data: UNESCO Institute for Statistics, 2012; created by author

On the graph below we can observe the trend of tertiary enrolment since 1998 up to 2010, both total and for females. The total tertiary enrolment ratio has doubled within this period (from 21% in 1998 up to 52% in 2010); females even present more than half of all students enrolled (60% in 2010) (UNESCO Institute for Statistics, 2012).



Graph 5: Gross tertiary enrolment ratio in Mongolia, total and females

Source of data: UNESCO Institute for Statistics, 2012; created by author

There are 28 institutions in Mongolia which provide tertiary education. The leading one is National University of Mongolia which has almost 14,000 students (Consortium of Mongolian Universities and Colleges, 2010). There is big role of private universities; enrolment into these private institutions is over 30% (Postiglione, 2011).

9.2. Angola

9.2.1. General description of the country

Angola is south-African country which tries to recover after almost 30 years lasted civil war. Oil holds high economic importance for Angola which makes 85% of GDP and which is important contributor for improving the overall economic situation of the country; supported by extraction of diamonds. The main export partner is also China, as in the case of Mongolia (CIA, 2012a).

9.2.2. Relations with the Czech Republic

The Czech Republic (as former Czechoslovakia) has diplomatic relations with Angola since 1975 but it supported the country since 1960's in its decolonization efforts (MZV, 2006). It was country with one of the strongest relations from the whole African region. According to accepted conception for 2010-2017, Angola does not belong to priority countries but it is still of high importance for the Czech Republic as former priority country so it does not interrupt the cooperation, only transform its focus on different fields. Above mentioned conception recommends to focus on export relations with the country and also on agricultural and social development.

The Czech Republic has good trade relations with Angola. There was huge increase of year-to-year trade in 2010 – about 160% up to 562 million Kč; with positive trade balance 502 million Kč (MZV, 2011c). Angola is destroyed after long civil war so the Czech Republic can gain from high potential of the Angolan import market. Because of long mutual relations the Czech products hold good reputation and they are considered as of high quality (MZV, 2011a).

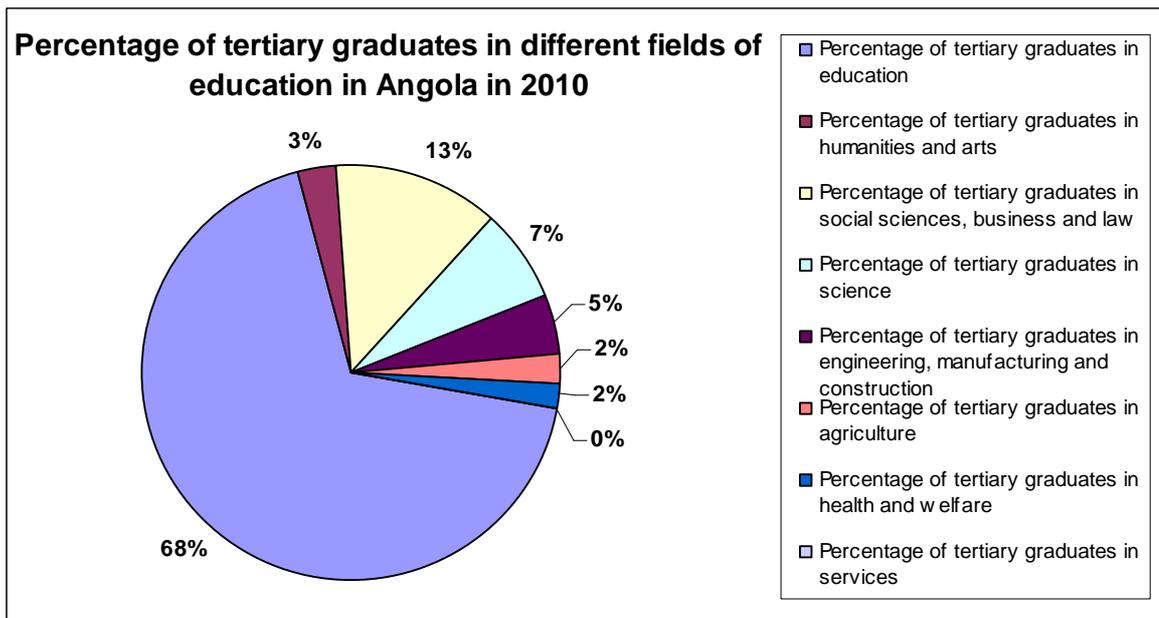
In 2010, the Czech government invested 35 million Kč into Angola; the highest share covered market implementation of agricultural products in Bié province which is the main territory where the Czech Republic helps (MZV, 2011c).

In 80's there were provided 20 scholarships each year; Angolans could also study high schools or training schools or improve their already gained knowledge such as in case of doctors who came to the Czechoslovakia to widen their skills. Thanks to this fact the Czech Republic has good relations with Angola via graduates who have high job positions in the government system (MZV, 2006). Angola gained only 2 scholarships for the school year 2010/2011; in total there were 19 scholars in this school year studying mainly geology, agricultural and technical topics (MZV, 2011a). Since March 2010, there is no Czech Embassy in Angola (MZV, 2011c) so it could become relatively difficult to coordinate the process of selection of applicants of scholarship provision as these are the main players at this stage. The Czech Republic widely supported Angolan schooling, first of all in agricultural field (MZV, 2011a). But the medium-term outlook of the Czech development cooperation expects to invest last 6 million Kč on projects in Angola in 2012;

for years 2013 and 2014 it does not anticipate any other resources to be spent (MZV, 2011b).

9.2.3. Tertiary education

Angola has its education system based on Portuguese origins as it used to be its colony but it also closely cooperated with Russia and Cuba before independence. Still in 80’s it had only one university in the whole country, in Luanda (Warner, 1989). After beginning of the new millennium, expansion of private universities came (Calvarho *et al.*, 2003). In Angola, there is only 4% enrolled into tertiary education. Men to women ratio is almost half to half but women graduates present then only 31%. What is interesting fact, two thirds of all graduates in Angola is in education; the second popular field of study is social sciences, business and law, but women graduates present then only 31%. What is interesting fact, two thirds of all graduates in Angola is in education; the second popular field of study is social sciences, business and law (UNESCO Institute for Statistics, 2012).



Graph 6: Percentage of tertiary graduates in different fields of education in Angola in 2010

Source of data: UNESCO Institute for Statistics, 2012; created by author

There are not available long-term data to observe the trend in tertiary enrolment in Angola but there is proven increase since 1998 – from 1% to 4% in 2012 which is still very low

number; and also increase in female enrolment from 39% in 1999 to current 45% (UNESCO Institute for Statistics, 2012).

9.3. Comparison of Mongolian and Angolan development indicators and tertiary education sector

Both countries, Mongolia and Angola belong among low middle income countries (WB, 2012a; WB, 2012b). Although Mongolia has one of the lowest GDP per capita (2250 USD which assesses it as the 154th in the world) and Angola reaches almost twice higher values (WB, 2012a; WB, 2012b) when we compare the HDI indexes for both countries Angola is 148th while position of Mongolia is 110th (UNDP, 2012).

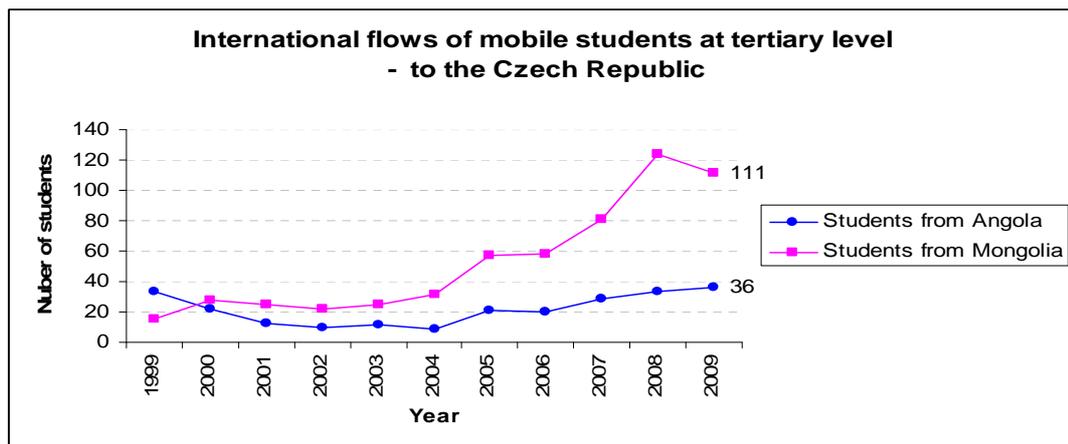
In their tertiary education sector, these two countries are very diverse. While Mongolian tertiary school enrolment is 52% the Angolan is only 4% which is very low number (WB, 2012a, WB, 2012b). Ratio of males and females enrolled into tertiary study programmes is satisfactory for both countries (60% of females for Mongolia and 45% for Angola) but while the ratio is the same for graduates in case of Mongolia, in Angola there graduate only 31% of women (WB, 2012a, WB, 2012b) which means that although they are enrolled they are not able to successfully finish their studies in the same amount.

Table 3: Main development and tertiary indicators for Mongolia and Angola

Indicator 2010/country	Mongolia	Angola
GDP per capita	2,250 USD	4,423 USD
- world position	154	137
HDI	0.653	0.486
- world position	110	148
Income level	lower middle	lower middle
Adult literacy rate	97%	70%
- % of illiterate females	41%	72%
Tertiary school enrolment	52%	4%
Tertiary education Enrolment	165,769	66,251
- females	60%	45%
Tertiary education: Graduates	34,211	5,727
- females	64%	31%
Tertiary education: Teaching Staff	8,783	2,407

Sources of data: WB, 2012a; WB, 2012b; WB, 2012c; UNDP, 2012; UNESCO Institute for Statistics, 2012; UN Data, 2012; created by author

On the graph below we can see how the flow of mobile students at tertiary level from Mongolia and Angola to the Czech Republic developed. There are much more students from Mongolia who come study to the Czech Republic at this level.



Graph 7: International flows of mobile students at tertiary level - to the Czech Republic

Source of data: UNESCO Institute for Statistics, 2012; created by author

10. Results and discussion

One of the recommendations of the recent analysis of Horký *et al.* (2011) was to focus on scholars from each country separately and to analyze scholar's experience, success and further utilization of their study gained in the Czech Republic in order to increase effectiveness of the whole Czech state scholarship provision system. This thesis follows this recommendation and focuses on in-depth study of post-graduate life of students from Mongolia and Angola, on their return to the countries of origin and their professional employment. The full version of this questionnaire is attached in annexes.

10.1. Results

Firstly there are presented results of the questionnaires distributed among Angolan and Mongolian former scholars.

10.1.1. Results from Angola

As was mentioned above, the main problem related to scholars from developing countries is lack of data and information about them after their graduation. Also in case of Angola shortage of contacts was faced. Finally, we got only 3 responses; in one case the questionnaire was filled only in half of questions so it can not be fully included in the study.

All of the respondents were men; two of them living in the Czech Republic since finishing their studies, one returned to his country of origin immediately after finishing his studies and he is living there currently. All of them are working and they claim that they do utilize knowledge gained during study in the Czech Republic in their job. None of them was ever involved in development or commercial activities of the Czech Republic in their countries of origin.

All three respondents have identified some problems which were related to their scholarships gained in the Czech Republic. Two of them mention too bureaucracy connected to acquisition of the scholarship, visas and stay in the Czech Republic. They also mention financial difficulties, separation from family or racism.

Table 4: Selected answers provided by respondents from Angola

Respondent	Gender	Currently	Currently living in	Years of study	Level of study in the Czech Rep.	Identified problems	Personally identified problems	Utilization of field of study	Found employment
1	M	working	country of origin	2003-2010	master and bachelor	bureaucracy	language, quality of teachers	yes	without problems
2	M	working + Ph.D. student	Czech Rep.	1992-1999	only master	bureaucracy, financial problems	racism	yes	after a long time
3	M	working	Czech Rep.	1984-1988	only master	separation from family	lack of support of Czech institutions	yes	after a long time

Very interesting is questionnaire filled by respondent 1 who finished both bachelor and master study in the Czech Republic; at Institute of Tropics and Subtropics of the Czech University of Life Sciences in Prague. He has returned to his country of origin immediately after his graduation and he claims that he has no problem to find a job in his country; he gained high position in development bank and his wage is above average of his country. He believes that his study in the Czech Republic has definitely contributed to better job position and higher wage in Angola.

He specifically points out one important thing, he says: “I knew that if I stayed in the Czech Republic I would not have such opportunities as in the country of origin and I do not understand why the others in the same situation do not leave the Czech Republic in order to help their home countries.”

He is still in contact with the University and also with his former colleagues from the school but he desires to be more involved in activities of the Czech Republic; in form of development and commercial cooperation which he has never took part in.

10.1.2. Results from Mongolia

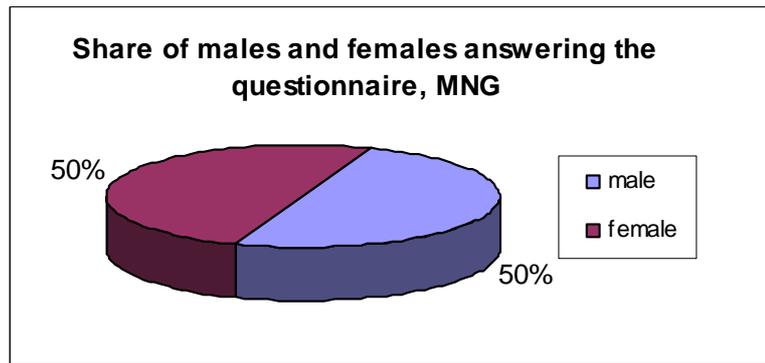
In case of the second observed country, Mongolia, the quantity of filled questionnaires returned was much higher than in case of Angola – finally we got 42 filled questionnaires complied with conditions to be used in this study. This enables us to analyze the situation in case of Mongolian scholars much deeper than for the Angolan one.

However, there were still some important questions missed in several questionnaires. There occurred two questions which were not answered almost at all – these were:

- Second part of question 26 which was supposed to explain more deeply positive answer to question “Are you in touch with other graduates who were also government scholars in the Czech Republic/Czechoslovakia? If yes, how often and how?”.
- And also question 27 which asked: “If you live in another country then your family, do you support them financially?”. This could be caused by the fact that majority of respondents lives in their country of origin, respectively in Mongolia. In case of relevant respondents they probably used their right not to answer such personal thing as the question was only voluntary. We got only one specific answer which stated that the respondent sends 500 USD to his family.

General characteristics of respondents

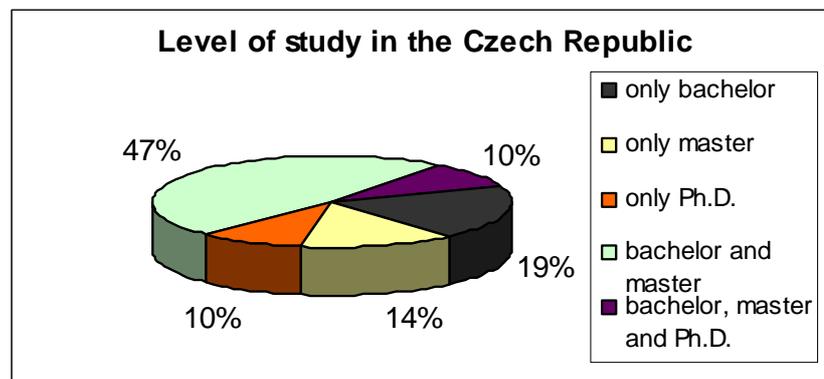
As was stated above, for the purposes of our study we gained 42 questionnaires. Although it was not aim of the study the gender of respondents was regularly distributed – 21 respondents were males and 21 were females.



Graph 8: Gender distribution of respondents from Mongolia

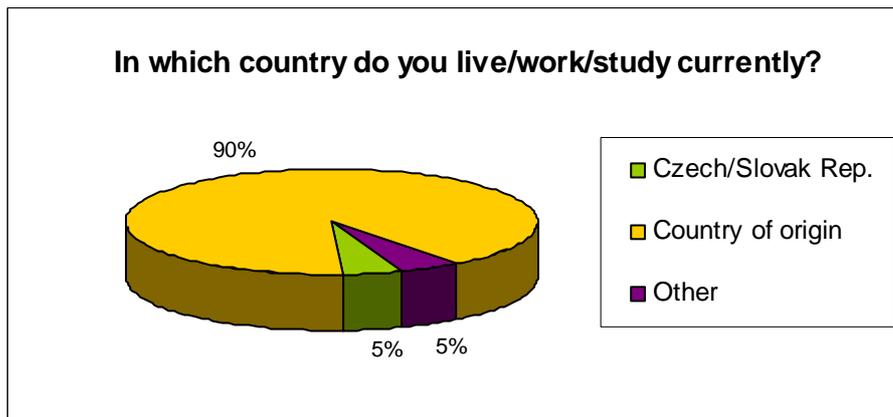
Majority of them were Czech/Czechoslovak scholars in 80's and 90's. Only 6 respondents stated that there were participants of the Czech state scholarship programme after the year 2000.

Almost half of respondents were students of both bachelor and master programmes – 20 of them; respectively 47%. Then the distribution among programmes is similar. Several students chosen to study only one level of their tertiary education in the Czech Republic and on the other hand 10% of them went through all the three steps available, i.e. from bachelor through master up to Ph.D. level.



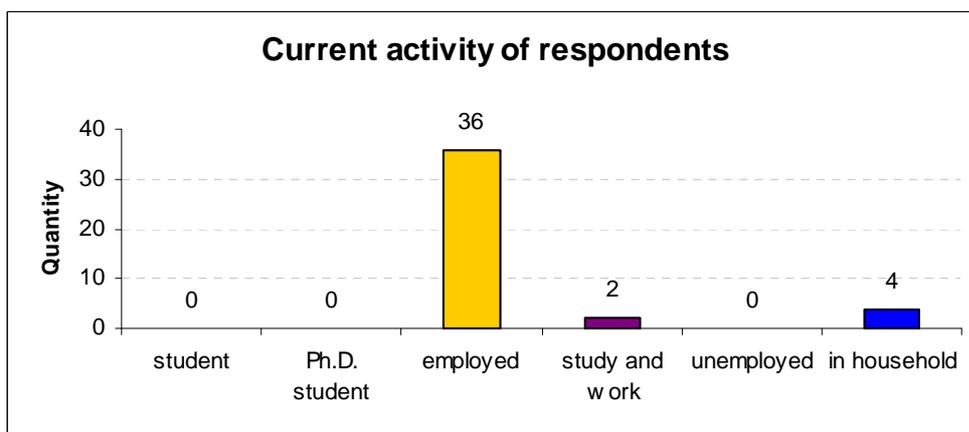
Graph 9: Level of study in the Czech Republic

Majority of respondents – 90%, indicated that they currently live in their country of origin, i.e. in Mongolia. Only 5% stayed in the Czech Republic or in Slovak Republic which we consider in this question as the same because these were scholars before the separation of Czechoslovakia so they stayed in the country in which they had studied.



Graph 10: Current country of stay

When we were interested in current activity of respondents 38 of them is employed, 2 of them are students in addition. 4 respondents are in household at present – these were 3 women and also a bit surprisingly one man.



Graph 11: Current activity of respondents

Type of employment is very diverse in case of these 42 former scholars. However there were some fields which occurred more often – these were:

- health care (4 times)
- building industry (4 times)
- education (3 times)
- position in offices (3 times)

Often types of heavy industry were also mentioned (metallurgy, mining, power industry); then e.g. agriculture, information technologies, food industry, leather processing industry or geology and biology.

Generally, we can say that the job positions of the respondents are relatively high – very often they hold leading roles. They are directors, managers, chiefs of departments or professional advisors in their fields.

Evaluation of the study in the Czech Republic

The students got chance to express their opinion about quality of their study in the Czech Republic. They were asked to give value from 1 to 5 to given indicators to show how much they consider the indicator to be a contribution for them. The indicators were six and the lower value meant the higher contribution.

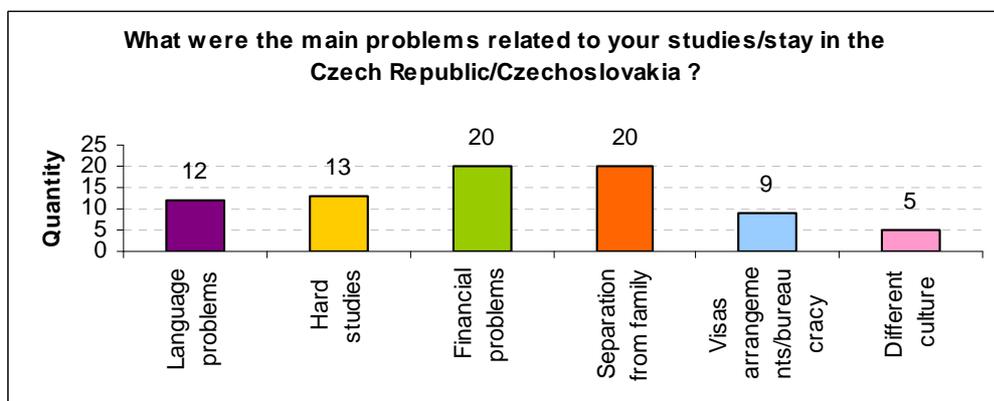
Table 5: Evaluation of the study in the Czech Republic

	Acquisition of professional knowledge	Extension of language skills	Experience from other culture	Become independent	Acquisition of contacts	Spent nice time
average	1.34	1.51	1.40	1.20	1.42	1.32
max	3	4	4	2	3	3
min	1	1	1	1	1	1
median	1	1	1	1	1	1
mode	1	1	1	1	1	1
variance	0.4	0.61	0.47	0.1	0.3	0.24
standard deviation	0.6	0.78	0.68	0.4	0.55	0.49

The best results were reached in case of indicator “become independent” – 1.2 which means that the respondents consider the scholarship in the Czech Republic as highly beneficial for them in this aspect. The least beneficial is according to the results “extension

of language skill” – 1.51. But despite these results the most frequent answers for all indicators were 1 which means that majority of the respondents was highly satisfied with the contributions which the study in the Czech Republic had for them.

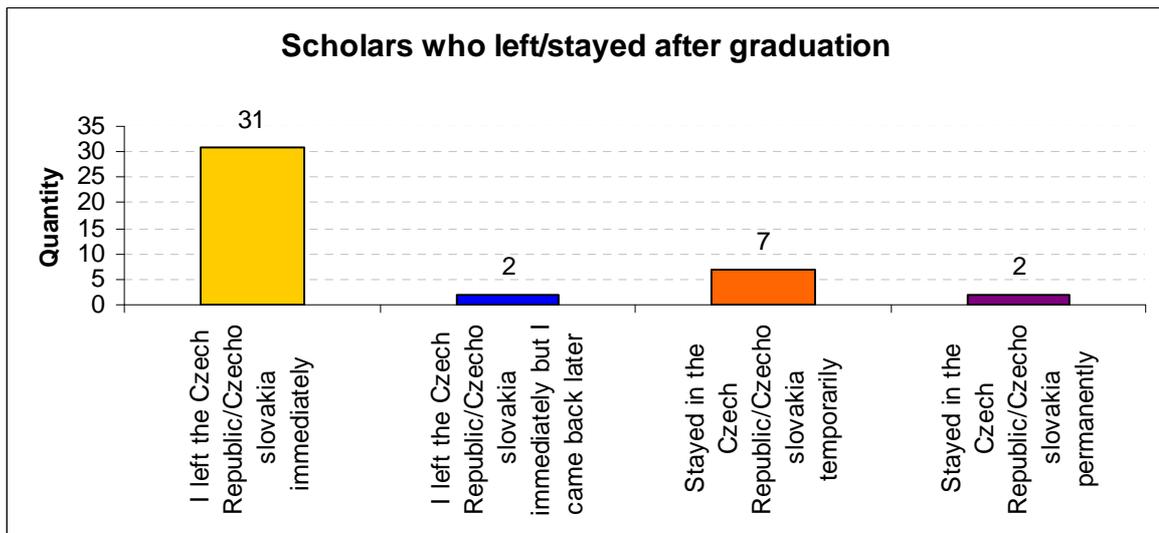
Moreover, we were also interested in the main problems which the scholars had to face during their studies and stay in the Czech Republic. Almost in half of questionnaires there were indicated financial problems and separation from the family. On the other hand scholars had generally no problems with the life in a different culture than they were used to.



Graph 12: Main problems related to studies in the Czech Rep./Czechoslovakia

Place of stay after graduation

As was stated above, majority of respondents (90%) currently lives again in their country of origin, i.e. in Mongolia. 34 people live there permanently since their graduation and although 2 people stated that they live in the Czech Republic permanently they used to live also in other country after their graduation before their return back to the Czech Republic (either in country of origin or in another developed country). Most of them left the Czech Republic immediately after their graduation (31), only 2 of them stayed in the Czech Republic permanently.

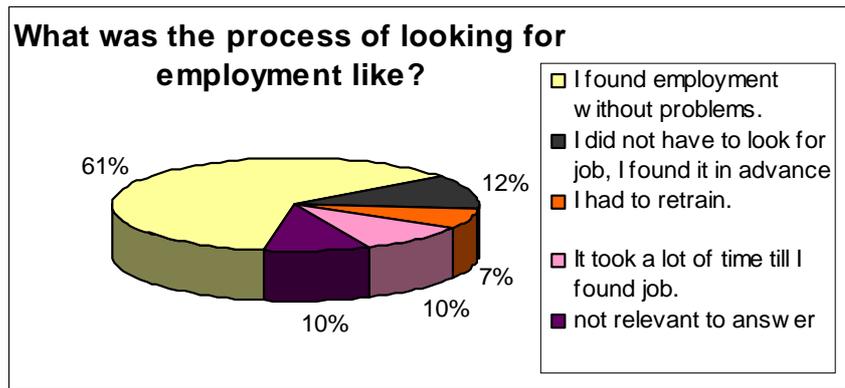


Graph 13: Scholars who left/stayed after graduation in the Czech Rep.

When the scholars stayed in the Czech Republic temporarily it was mainly in interval from 1 up to 3 years and then they went back to their country of origin, i.e. to Mongolia. Those who stayed here permanently live in the Czech Republic for more than 5 years. As the reasons for their permanent stay in the Czech Republic they both mention that they got used to other culture; other reasons were also partnership with partner who lives in the Czech Republic and also lower financial appraisal in Mongolia than in the Czech Republic.

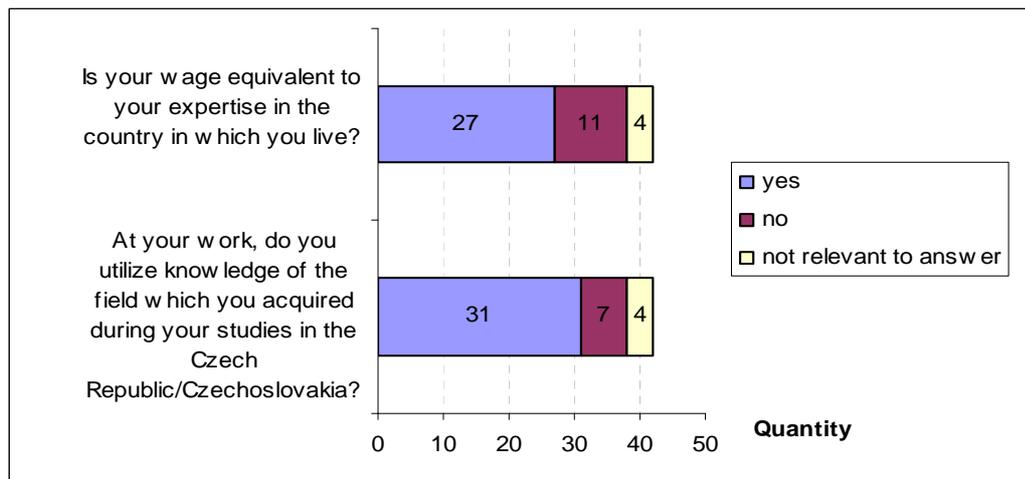
Evaluation of job opportunities after graduation

Over two thirds of respondents say that they did not have problems to find a job after their graduation – 61% describes the process as without problems, additional 12% has found a job in advance and then only entered upon. Problems occurred only in 17% of cases – 10% of former scholars had to look for a job for a long time, 7% had to retrain to be suitable and to meet conditions of the job market. Some of the respondents did not fulfil part of the questionnaire because they do not comply with requirements – they are in household; these are marked as “not relevant to answer”.



Graph 14: Description of process of looking for employment

Over 80% of respondents utilizes knowledge of the field which they acquired during their studies in the Czech Republic/Czechoslovakia. 70% of them also thinks that their wage is equivalent to their expertise in the country in which they live, mainly in Mongolia.



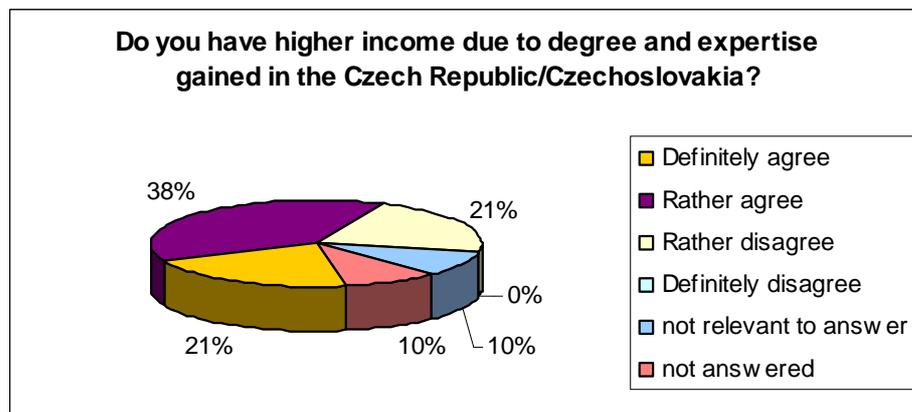
Graph 15: Utilization of knowledge gained in the Czech Rep./Equivalence of wage

When looking at level of income according to personal perception of respondents only 5 people think that their income is below average which is common in the country in which they live. 16 people marked their income as average and even a bit more, 17 people, indicated their income as above average.



Graph 16: Personal perception of level of income

Over half of respondents agree that acquisition of academic degree in the Czech Republic/Czechoslovakia and also relating expertise positively influenced the level of income they currently have; even 21% definitely agrees. On the other hand, 21% of scholars rather disagree (respectively 9 of 34 answers which we gained). In this question, there were also 4 answers left blank so the result is not valid for the whole sample we had for this study; another 4 people could not answer this question as they are in household and therefore have no income.



Graph 17: Influence of university degree on income

Further personal relations established in the Czech Republic

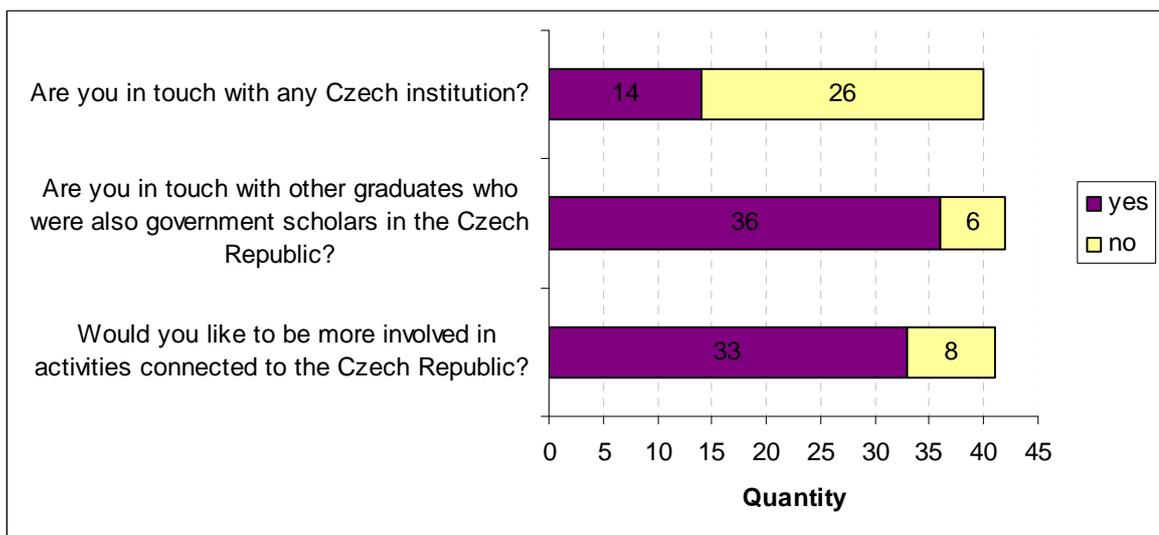
One part of the questionnaire was also focused on relations which the scholars established in the Czech Republic and if they still maintain them. Some of these questions were

intended for people who do not live in the Czech Republic any more therefore some of those were not answered by the two who stated that they live in the Czech Republic permanently. Again there were also left blank answers in some cases.

On question “Are you in touch with any Czech institution?” 14 respondents answered “yes”. When they were asked for further specification majority of them mentioned the Representative office of the Czech Republic in Mongolia. Otherwise were mentioned institutions related to study of these scholars – e.g. Motol hospital, Czech University of Life Sciences in Prague or Charles University in Prague.

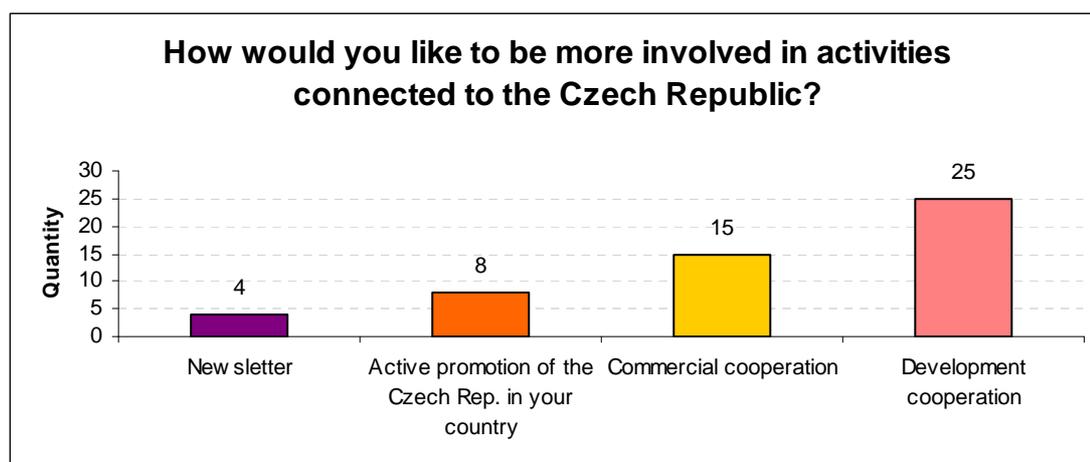
Much more people positively answered on question “Are you in touch with other graduates who were also government scholars in the Czech Republic?”. 36 of them say that they have still contacts with them, mainly via modern communication tools such as emails or also personally during meetings of graduates organized by association of graduates in the Czech Republic (one of the respondent is head of this association). One respondent also mentioned meetings about development possibilities of Mongolia as occasion to meet other graduates.

Many scholars has also established good and permanent relations with other schoolmates or other Czechs and they are still in touch with them – again mainly via email or different types of messengers. Few are also in business partners in the Czech Republic but they did not specify the commercial relations more deeply.



Graph 18: Contact with the Czech Rep./other graduates/Czech institutions

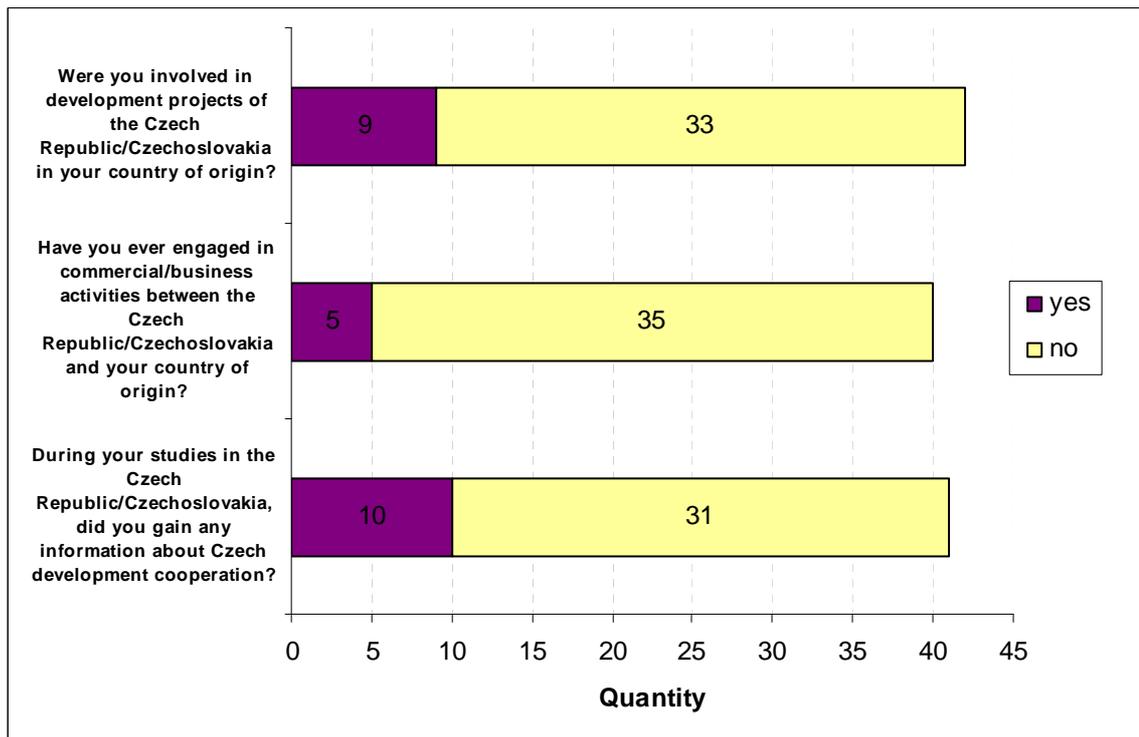
What is also an interesting point to be mentioned it is the fact that 33 respondents, i.e. 80% of all respondents, would like to be more involved in activities connected to the Czech Republic; only 8 ticked negative answer. These 33 people who are willing or directly desire to be more involved in such activities were asked to specify more in which way they would appreciate to establish such cooperation. The most common answer to this question was “development cooperation” (25 ticks), it means development cooperation of the Czech Republic and Mongolia. Many would also acknowledge commercial cooperation.



Graph 19: Type of desired involvement in activities connected to the Czech Rep.

But on the other hand, despite their desire to be involved in activities connected to the Czech Republic there is only small amount of people who even gained any information about Czech development cooperation during their studies in the Czech Republic/Czechoslovakia (only 10 respondents confirmed that they got such information).

Even less people were directly involved already. In case of commercial cooperation there were 5 respondents who had some experience in commercial connection between the Czech Republic and Mongolia. Unfortunately they did not specify the cooperation more precisely; only in one case the respondent described that he was professional assistant of Mongolian ministry of industry in case of trade between Czech and Mongolian government with devices used in leather industry in 80's.



Graph 20: Information about development cooperation/ Involvement in development projects/ Involvement in commercial activities

More concrete were people in case of the development cooperation. 9 of them were already involved in some form of development projects of the Czech Republic/Czechoslovakia and Mongolia. They have mentioned following types of involvement:

- wastewater treatment plant in Darkhan, Mongolia
- professional adviser in a project focused on improvement of freshwater sources in Mandalgobi (installation of devices, professional training)
- translator in project focused on innovation of leather processing technology
- translator in Czech project of state hospital in Mongolia
- coordinator of projects of apprentice agricultural education in Mongolia and of farm animals registration

They cooperated with Czech development agency very often.

10.2. Relation of income and gender

The study was interested in deeper relation between gender and income which the former scholars receive in Mongolia. The OLS method in Gretl gave following results:

Model 1: OLS, using observations 1-42
Dependent variable: y

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>
const	3.09524	0.442883	6.9888	<0.00001 ***
x ₁	-0.666667	0.280104	-2.3801	0.02216 **
Mean dependent var	2.095238	S.D. dependent var	0.957882	
Sum squared resid	32.95238	S.E. of regression	0.907640	
R-squared	0.124051	Adjusted R-squared	0.102152	
F(1, 40)	5.664740	P-value(F)	0.022165	
Log-likelihood	-54.50069	Akaike criterion	113.0014	
Schwarz criterion	116.4767	Hannan-Quinn	114.2752	

When using these estimated parameters, the quantified model is:

$$y = 3.095 - 0.667x_1.$$

It means that the dependent variable y is inversely proportional to the independent variable x_1 ; respectively that the higher x_1 the lower y . In our case where women have higher code than men (1 for men and 2 for women) the results shows lower income for women and higher for men. The result for men is $y = 3.095 - 0.667*1 = 2.428$ and for women it is $y = 3.095 - 0.667*2 = 1.761$. From this result we can conclude that if it is man the income is rather above average while in case of woman the income is rather average; based on our sample of 42 respondents.

Considering statistical verification of the model, coefficient of determination R^2 reaches low value, $R^2 = 0.12$, which means that the estimated regression line does not fits the real data very well and that future outcomes are not likely to be predicted by the model. The variation of dependent variable is explained by variation of independent variable only from 12%. This could be increased by adding more appropriate variables into the model following by analyses via multiple regression.

According to another statistical verification parameter - p-value, we can say that both parameters are significant; the constant as well as independent variable x_1 representing gender. The independent variable x_1 is significant parameter with 95% probability.

10.3. Discussion

10.3.1. Modest but satisfactory Angolan results

There is too little information to make any broader discussion what the relations of separate answers are but despite this fact there are some interesting points in these three questionnaires.

Firstly, when we compare answers of the first respondent who returned to the country of origin immediately after finishing his study and the two who stayed in the Czech Republic permanently we can find one interesting thing – both who stayed in the Czech Republic had problem to find a job after their graduation and they think that it took them a long time. On the other hand, the one who returned to his country of origin immediately he had no problems to find a good and well-paid job. In this case, we can see that the scholars who finish university have a competitive advantage in developing countries. The same should be valid for the Czech Republic but in situation when the universities are opened almost to everybody and it is much easier to reach the university degree it is also then much more difficult to find a suitable and proper job in the Czech Republic. But finally, all of the respondents claim that they utilize their studies so we can conclude that it was a contribution for them to gain the scholarship.

This example also shows that it is essential to find scholars who want to return to their countries of origin and do not see the Czech Republic only as the way how to get to the developed part of the world. The first respondent knew that he find good job in his country after his graduation and he wants to help the country – he was really motivated to return back and not to stay in Europe. He also works in development bank so he is further involved in development activities in his country and he contributes to better situation of the whole society not only to himself.

Another common characteristic is that none of them was ever involved in development or commercial activities of the Czech Republic in their country of origin; respectively in Angola. This is the point in which the approach of the Czech Republic could improve because as we once establish good relations with somebody from any developing country where we have some interests we should support this relation and try to gain something positive from it. The statement that we have good relations with scholars can be supported by answers of the first Angolan respondent who says that he is still in contact with the

school and also with his former colleagues. He also desires such kind of cooperation so it can be assumed that if we would offer him such opportunity he would accept it.

Last point which should be discussed about Angola are the problems mentioned by the respondents. One of them mentioned separation from the family – sure, this can occur still but he was in the Czech Republic at the end of 90's. Today this problem can be eliminated by modern communication tools such as skype or mobile phones. As it is obvious by current students it is also easier to travel home more often or members of families come to the Czech Republic to visit their relatives. The language barrier and bureaucracy is mentioned also by current students from different countries very often. That is the point where the Czech institutions should come with the reform of the system – make the system more comprehensive and provide study programmes mainly in English in order to eliminate the language problems of the scholars.

10.3.2. Meaningful cooperation with Mongolia

In case of Mongolia we get much broader view of the situation than in case of Angola. But still 42 respondents are very small sample to make any general conclusion; on the other hand it enables us to imagine a bit how the situation of graduates under the Czech scholarship programme looks like.

We got data mainly from scholars who received scholarships in 80's and 90's which on one hand does not depicts situation of recent scholars but on the other hand provides more long-term and continuous perspective. We found out that majority of respondents lives again in their country of origin, i.e. in Mongolia; most of them returned there immediately after their graduation. As was stated above, these respondents studied in the Czech Republic mainly in 80's and 90's which means that there were in the former communist Czechoslovakia which was separated from the Western Europe and considered also as developing country (although still more developed than Mongolia). This fact could discourage the scholars to stay here and not to return back home. But also the smaller group of recent scholars returned back to Mongolia. When we compare our result with studies of Jelínek *et al.* (2004) or Horký *et al.* (2011) we can say that we got more satisfactory result and that the return rate of scholars is high although it is not hundred percent.

The fact that majority of Mongolian scholars return back does not enable us to analyze reasons of not returning and then it prevents us from offering possibilities how to precede that scholars do not return to developing countries and stay in the developed part of the world. For this reasons it would be necessary to focus only on respondents who stayed in the Czech Republic or went to other developed country after their graduation.

When we focus on their experience with study in the Czech Republic/Czechoslovakia we can state that the respondents were generally satisfied with it. The highest contribution was confessed to “become independent” which is rather logical because you have to become independent when you come to other country with different culture, with different language and also with different habits, far away from your family and from the environment which you are used to. On the opposite side of value of contributions is “extension of language skills”. Although nowadays the programmes taught in English are offered and spread further, in last decades and first of all under the communist regime the scholars had to overcome the language barrier and to learn difficult and for them absolutely unknown language which then had for them no significance when they returned back to Mongolia. This finding only corresponds with the recommendations to offer only programmes taught in English. On the other hand, knowledge of Czech language contributes to their involvement in activities related to the Czech Republic – as some of them mentioned they were e.g. translators in Czech projects run in Mongolia so they finally utilized knowledge of the language and of the culture. Generally we can say that the respondents evaluate their studies in the Czech Republic/Czechoslovakia as satisfactory as in all indicators we have asked about were the most frequent answer “1” which mean the highest contribution.

As the main problems related to study in the Czech Republic were indicated “financial problems” and “separation from family”. Again we can assume that in case of separation from family it could be a bit different among recent scholars because development of information technologies and modern communication tools causes that you can stay in touch with anybody in the world although it can not fully substitute personal meeting. The financial problems mentioned only support another recommendation of Horký *et al.* (2011) where they offer increase of contemporary level of the scholarship provided from 9000 Kč by 20-25%.

Next positive discovered fact is that 38 out of 42 respondents are employed; the rest is in household. It could signify that they utilize the competitive advantage caused by high-quality tertiary education. It also means that these respondents are able to evaluate the contribution which study in the Czech Republic/Czechoslovakia had for them. Majority also marked that they utilize knowledge and expertise gained during their studies in the Czech Republic/Czechoslovakia. It means that the study was worthy for them and also for their country as they returned back to Mongolia and are involved in the economy and functioning of the country.

On the other hand, there was also considerable amount of respondents who had problems to find a job – it took them a lot of time or they had to retrain. Several answers also determine that according to personal perceptions of respondents they have wage below average level applicable for the country in which they live. This situation is a bit unexpected as the respondents have university degree from generally reputable universities and also as education is still limiting factor of developing countries and has high influence on opportunities which people have. But still, contribution of degree gained in the Czech Republic/Czechoslovakia to the higher level of income was confirmed by majority of the respondents.

Last part of the questionnaire focused on involvement of respondents in activities connected to the Czech Republic. 80% would desire to be more involved in such activities, mainly in form of commercial or development cooperation. On the other hand, only small portion of them was involved in such activities already. It means that there is potential which is still not utilized. These people have already established good relations with the Czech Republic and still want to be involved; many of them know Czech language which is another positive factor. This aspect is supported by answers to the question “Were you involved in development projects of the Czech Republic/Czechoslovakia in your country of origin?” where a few respondents mentioned that they worked on development projects as translators. The Czech Republic should realize the advantages of these human resources and use them in a larger extent because they can be mutually beneficial.

10.3.3. Evidence of influence of gender on income

Generally, it is believed that gender influences level of income; respectively that women reach lower income level than men. This is true for the whole world, both developed and developing countries. This displeasing trend and the initial assumption have been confirmed also by the regression analysis included in this study.

According to the results, women reach only average income in the country in which they live currently while men's income is rather above average. It could provoke discussion if the scholarships should be provided to women at all when their income is still average. But we can not forget the fact that Mongolia still belongs among developing countries where the differences between men and women are still high. Without education it is possible that these women would not reach even this level of income and that their economic situation would be much worse. Evident positive influence of gender can be seen in case of men. They reach above average income which means that they are the more privileged in the job market.

In order to increase coefficient of determination which was low (only 12%) it would be necessary to add more appropriate variables into the model. There are many other issues which influence the level of income although gender is significant and variations in this variable have significant impact on it. For sure, education itself plays also its role. We can assume that the tertiary education, partially or completely gained in the Czech Republic/Czechoslovakia, is an important factor increasing probability of higher income. However, although there was analyzed also influence of type of degree on income reached the significance of this factor was not proved.

But still, there are variables which should be included but can not be measured adequately. Also personal characteristics of people and their wants are important in reaching higher income. It depends on their motivation, efforts, dutifulness, confidence and purposeful nature of people when they look for a job and then work. We have to also consider the influences which people can not affect personally; occurring mainly in developing countries. People are often locked in one part of society and it is not possible for them to get higher; corruption and bribery is very common in these countries so the better jobs are assigned to selected people; and so on. Then these people can reach higher education but it is still not enough.

Therefore we can conclude that although women reach statistically lower income than men in our case education is still a competitive advantage for them and they at least reach average level of income in their country.

11. Conclusion

The Czech Republic as the responsible world member did not hesitate to help developing countries in need. It has long-term experience with provision of scholarships to students from developing countries which begun in 1950's and which are one of the tools implemented into the overall foreign policy in order to help the world to develop.

It is necessary to support developing countries in their further positive development and in increase of their standard of living for which education can be used as a tool. But still this approach has to be managed carefully and operated in a sustainable way. Therefore the analysis of all positive and negative factors of the system is necessary and it should not be omitted as it can contribute significantly to the overall good functioning of the system.

There is not any uniform system of evaluation; there were only several analyses which were focused on effectiveness of the scholarship provision system and always recommended several steps to increase value of this indicator. The recent one, analysis of Horký *et al.* (2011) included as one of the recommendations to focus on each country separately.

Despite some difficulties with the data collection caused mainly by difficult access to contacts to former scholars which are not kept by any Czech institution there was gathered set of data which provides interesting look at the situation of scholars from Angola and Mongolia who graduated at the Czech universities under the Czech scholarship programme. In case of Angola there was really low percentage of returned and fulfilled questionnaires which unfortunately does not provide enough data to be analyzed but still it gave one important comment which is "I knew that if I stayed in the Czech Republic I would not have such opportunities as in the country of origin and I do not understand why the others in the same situation do not leave the Czech Republic in order to help their home countries." As in case of following discussed scholars from Mongolia the Angolan respondents utilize knowledge gained during studies in the Czech Republic.

Much broader description of the situation is provided in case of Mongolia. Despite assumption and previous findings about return of scholars into their countries of origin in case of Mongolia 90% of respondents returned to Mongolia and majority of them even immediately after their graduation. If they are not in household all of them are employed and they are predominantly satisfied with their level of income which is average or very

often also above average income typical for country in which they live. They mainly did not have problems to find a job and they utilize the knowledge and education which they gained in the Czech Republic. Generally it can be said that the respondents work at higher or leading job positions.

The Mongolian respondents criticised in most cases financial problems and separation from the family. The second critic is in close relation with studies in distant country although it can be eliminated a bit by modern communication tools nowadays. But the mentioned financial problems only support findings of Horký *et al.* (2011) and following recommendation of increase of the scholarship.

The lowest value in evaluation of contribution of studies in the Czech Republic got extension of language skills. It again only confirms previous recommendation for the system of scholarship provision that is to offer study programmes only in English. On the other hand, there must be mentioned that the knowledge of the Czech language enabled several respondents to take part in development projects run in Mongolia which means that also this knowledge was utilized subsequently.

Despite good relations established between the scholars and the Czech Republic and their desire to be included in some activities related to the Czech Republic (predominantly in form of commercial or development cooperation) not many of them have been included already. In this point it can be stated that the Czech Republic does not utilize the potential which was made during the provision of the scholarships and which could be beneficial for the Czech Republic as result of resources expended on the scholars and their education. Because they reached good job positions in their country they could influence e.g. the commercial relations between the Czech Republic and Mongolia or be reliable co-operators of the Czech development efforts. To enable this it would be necessary to keep contact with the graduates also after their return to the country of origin which is unfortunately not done currently.

The statistical analysis has proved that there is significant influence of gender on level of income which the Mongolian respondents reach in their country. Women are the disadvantaged and men reach higher income, respectively above average income. However, women have average income which means that their situation is improved as well compared with situation in the rest of the society.

After analysis of results got from data collected and application of results on the hypothesis stated at the beginning it can be concluded that there is evidence that the Czech state scholarship provision improves employment opportunities and job position for its receivers after finishing their studies. Majority of scholars returned back to their country of origin so they can contribute to further development of their country and of the society in which they live. Willingness of respondents to be included in activities related to the Czech Republic and their good relation to the country means that there could be benefits which the Czech Republic can get reversibly but it has to put some more effort into this activity.

But still the sample of respondents was small and there would be necessary to collect much more data and to include all the remaining countries which participate in the scholarship programme to make these findings valid in general.

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13. Annexes

13.1. Questionnaire

Dear graduate,

We would like to kindly ask you to take part in a short 15-20 minute anonymous survey that evaluates the provision of government scholarships to students from developing and transition countries.

This survey targets graduates who have completed studies in the Czech Republic or Czechoslovakia. Primarily the survey targets absolvents who at least for some part of their studies were granted a scholarship by the government of the Czech Republic or Czechoslovakia.

All data that you will provide will be processed collectively and will be used to evaluate the effectiveness of the programme.

You are not obliged to disclose your personal data such as your name or contact. However we will be very grateful if you do so. It will enable us to share the evaluation findings with you. Your name or any personal information will not be included in the final evaluation report.

If you have any questions regarding this survey please contact us at petra.vasku@centrum.cz.

Thank you for the time you took to complete the survey.

Research Team of the Institute of tropics and subtropics, Czech University of Life Sciences, Prague.

1. Currently, I am:

- Student of the government scholarship programme of the Czech Rep. (Do not continue in the questionnaire.)
- Graduate of the government scholarship programme of the Czech Rep./Czechoslovakia
- I finished my studies before graduation. (Do not continue in the questionnaire.)

If you finished your studies before graduation, please, indicate why:

2. I was government scholar of the Czech Republic/Czechoslovakia:

- Year FROM TO

3. What programme did you study in the Czech Republic?

- Only bachelor
- Only master
- Only Ph.D.
- Bachelor and master
- Bachelor, Master and Ph.D.

4. Please fill in adequate information for your study programmes::

	Name of the university	Faculty	Field of your study	Year of initiation	Year of finishing
Bachelor					
Master					
Phd.					

5. Why did you decide to study in the Czech Republic/Czechoslovakia?

6. Evaluate contribution of your study in the Czech Republic/Czechoslovakia: (1 – maximum contribution; 5 – no contribution)

- Acquisition of professional knowledge 1 2 3 4 5
- Extension of language skills 1 2 3 4 5
- Experience from other culture 1 2 3 4 5
- Become independent 1 2 3 4 5
- Acquisition of contacts 1 2 3 4 5

- Spent nice time 1 2 3 4 5
- Other: (fulfil and evaluate)
 - 1 2 3 4 5
 - 1 2 3 4 5

7. What were the main problems related to your studies/stay in the Czech

Republic/Czechoslovakia ?

- Language problems
- Hard studies
- Financial problems
- Separation from family
- Visas arrangements/bureaucracy
- Different culture
- Other: (please, fulfil)

8. Currently:

- I am a student (of other master programme) (do not continue in the questionnaire)
- I am Ph.D. Student.
- I work.
- I study and work at the same time.
- I am unemployed. (Continue with question 16.)
- I am homemaker. (Continue with question 16.)
- Other: (please, fulfil)

9. What is your post/job position?

10. In which field do you work?

11. At your work, do you utilize knowledge of the field which you acquired during your studies in the Czech Republic/Czechoslovakia?

- Yes
- No

12. I found employment:

- Without problems.

- I did not have to look for job, I found it in advance.
- I had to retrain.
- I took a lot of time till I found job.
13. Is your wage equivalent to your expertise in the country in which you live?
- Yes
- No
14. Your income in the country in which you live is:
- Below average
- Average
- Above average
15. Do you have higher income due to degree and expertise gained in the Czech Republic/Czechoslovakia?
- Definitely agree
- Rather agree
- Rather disagree
- Definitely disagree
16. After my graduation in the Czech Republic/Czechoslovakia I worked/studied/lived:
- Only in the Czech Republic
- Only in the country of origin
- Partially in the Czech Rep., partially in the country of origin
- Other: (please, fulfil)
17. After my graduation:
- I left the Czech Republic/Czechoslovakia immediately (continue with question 19)
- I left the Czech Republic/Czechoslovakia immediately but I came back later (continue with question 19)
- Stayed in the Czech Republic/Czechoslovakia temporarily
- Stayed in the Czech Republic/Czechoslovakia permanently
18. How long did you stay in the Czech Republic/Czechoslovakia after your graduation?
- Less than 1 year
- 1 up to 3 years

- 3 up to 5 years
- More than 5 years

19. To which country you went after finishing stay in the Czech Republic/Czechoslovakia? (Respondents living in the Czech Rep. permanently do not fulfil)

- Country of origin (Continue with question 26.)
- Developed country (EU, USA, Australia, etc.)
- Other developing country: (please, fulfil)

20. If you did not return to your country of origin, why?

- Because of lower wage in the country of origin than in the country in which I live
- Because of my partner who lives in the country in which I live
- In my country of origin, there I do not find job for which I am qualified/skilled.
- Because of political reasons (conflicts, non-democratic regime, disturbances)
- I do not want to live in my country of origin.
- I got used to way of life/culture in the country in which I live.
- Other: (please, fulfil)

21. In which country do you live/work/study currently?

- Czech Rep. (Continue with question 26.)
- Country of origin
- Other: (please, fulfil)

22. Are you in touch with any Czech institution?

- Yes
- No

If yes, please, indicate with which institution (eg. school, etc.)

23. Are you in personal touch with anybody from the Czech Republic? If yes, with whom and how?

24. Would you like to be more involved in activities connected to the Czech Republic?

Yes

No

25. If yes, how?

Newsletter

Active promotion of the Czech Rep. in your country

Commercial cooperation

Development cooperation

26. Are you in touch with other graduates who were also government scholars in the Czech Republic?

Yes

No

If yes, how often and how?

27. If you live in another country than your family, do you support them financially?

Yes

No

If yes, how much on average per month (in USD)? (voluntary question)

28. During your studies in the Czech Republic/Czechoslovakia, did you gain any information about Czech development cooperation?

Yes

No

If yes, where?

29. Were you involved in development projects of the Czech Republic/Czechoslovakia in your country of origin?

Yes

No

If yes, please, briefly describe the project, organization and your position:

30. Have you ever engaged in commercial/business activities between the Czech Republic/Czechoslovakia and your country of origin?

Yes

No

If yes, please, briefly describe the project, organization and your position:

31. Country of origin:

32. Gender

Man

Woman

33. Surname, Name, Title (voluntary):

34. Contact (email, address):

35. If you want to indicate more information, please, do not hesitate to add them:

13.2. Data set for the simple linear regression model

Respondent	Level of income in the respondent's country of stay	Gender
	y	x1
1	3	1
2	3	2
3	3	1
4	3	1
5	3	2
6	3	2
7	3	1
8	3	1
9	1	2
10	2	1
11	2	1
12	2	2
13	2	2
14	3	1
15	0	2
16	1	2
17	3	1
18	1	2
19	2	2
20	3	1
21	2	2
22	3	1
23	0	2
24	2	1
25	3	2
26	3	1
27	3	1
28	2	2
29	1	1
30	1	2
31	0	1
32	2	2
33	2	1
34	0	2
35	3	1
36	2	1
37	2	2
38	2	2
39	2	2
40	2	1
41	3	2
42	2	1

13.3. Influence of type of degree gained in the Czech Republic/Czechoslovakia on higher income reached due to this degree

Model 1: OLS, using observations 1-42
Dependent variable: y

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	1.60387	0.356826	4.4948	0.00006	***
x1	0.059041	0.104682	0.5640	0.57590	
Mean dependent var	1.789429	S.D. dependent var		0.887801	
Sum squared resid	32.06083	S.E. of regression		0.895277	
R-squared	0.007890	Adjusted R-squared		-0.016913	
F(1, 40)	0.318101	P-value(F)		0.575900	
Log-likelihood	-53.92469	Akaike criterion		111.8494	
Schwarz criterion	115.3247	Hannan-Quinn		113.1232	

Note:

Dependent variable – y; Do you have higher income due to degree and expertise gained in the Czech Republic/Czechoslovakia? (question 15)

Definitely agree

Rather agree

Rather disagree

Definitely disagree

Independent variable – x1; What programme did you study in the Czech Republic? (question 3)

Only bachelor

Only master

Only Ph.D.

Bachelor and master

Bachelor, Master and Ph.D.

13.4. Influence of type of degree gained in the Czech Republic/Czechoslovakia and gender on higher income reached due to this degree

Model 1: OLS, using observations 1-42
Dependent variable: y

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	3.16363	0.527972	5.9920	<0.00001	***
x1	-0.656535	0.286453	-2.2919	0.02739	**
x2	-0.0265957	0.108533	-0.2450	0.80770	
Mean dependent var	2.095238	S.D. dependent var		0.957882	
Sum squared resid	32.90172	S.E. of regression		0.918495	
R-squared	0.125397	Adjusted R-squared		0.080546	
F(2, 39)	2.795837	P-value(F)		0.073335	
Log-likelihood	-54.46838	Akaike criterion		114.9368	
Schwarz criterion	120.1498	Hannan-Quinn		116.8475	

Note:

Dependent variable – y; Do you have higher income due to degree and expertise gained in the Czech Republic/Czechoslovakia? (question 15)

Definitely agree

Rather agree

Rather disagree

Definitely disagree

Independent variable – x1; What programme did you study in the Czech Republic? (question 3)

Only bachelor

Only master

Only Ph.D.

Bachelor and master

Bachelor, Master and Ph.D.

Independent variable – x2; gender (question 32)

man

woman

13.5. Influence of type of degree gained in the Czech Republic/Czechoslovakia and gender on level of income in respondent's country of stay

Model 1: OLS, using observations 1-42
Dependent variable: y

	<i>Coefficient</i>	<i>Std. Error</i>	<i>t-ratio</i>	<i>p-value</i>	
const	3.16363	0.527972	5.9920	<0.00001	***
x1	-0.0265957	0.108533	-0.2450	0.80770	
x2	-0.656535	0.286453	-2.2919	0.02739	**
Mean dependent var	2.095238	S.D. dependent var		0.957882	
Sum squared resid	32.90172	S.E. of regression		0.918495	
R-squared	0.125397	Adjusted R-squared		0.080546	
F(2, 39)	2.795837	P-value(F)		0.073335	
Log-likelihood	-54.46838	Akaike criterion		114.9368	
Schwarz criterion	120.1498	Hannan-Quinn		116.8475	

Note:

Dependent variable – y; Your income in the country in which you live is

Below average

Average

Above average

Independent variable – x1; What programme did you study in the Czech Republic?
(question 3)

Only bachelor

Only master

Only Ph.D.

Bachelor and master

Bachelor, Master and Ph.D.

Independent variable – x2; gender (question 32)

man

woman